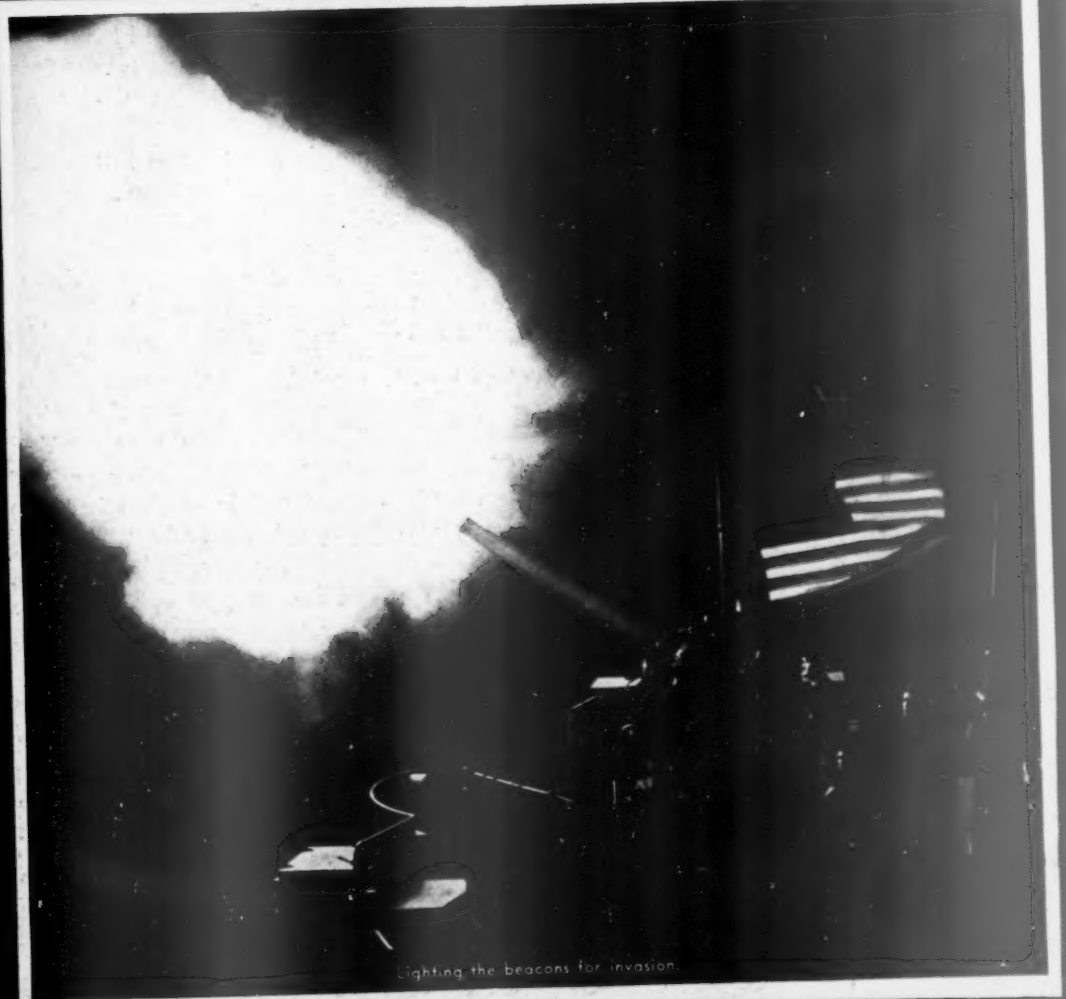
WEEK AGO

YEAR AGO

START OF WAR 1939

BUSINESS WEEK



Lighting the beacons for invasion

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USINESS
EEK
DEX

I just saw young Dan off to the Army

DAN isn't my boy, but his own dad and mother thought it would be easier for Dan if they weren't at the depot. So I was the one who stood with him, grinning and kidding and then turned with a lump in my throat as the sergeant's shrill whistle blew and Dan fell into rank and marched down the stairs out of sight.

And in my heart is a bitter hate—hatred for the enemies that forced these sad circumstances upon us—hatred for any and all persons—politician, farmer, industrialist, labor leader, or worker, who by his thoughts or acts does anything to double-cross or betray that kid.

I remember when I bought him his first ball bat—it was bigger than he was. I stood and yelled as he punched through tackle in his high school football games. How surprised and proud I was when I saw him taking the master's chair in his college fraternity. I never knew Dan could speak so well or be so self-possessed. I remember when he got his first job (he landed it himself) and won his first promotion.

No, Dan isn't my boy—he's a friend's—a neighbor's kid whom I saw grow from a baby into a fine, clean young man, on the way to being the kind of man and citizen our country needs.

Of course, Dan is coming back—I'll see him again. Sure, army life is just what he needs—it will do wonders for him physically, build him up, make him tough, more reliant, and confident.

. . . but maybe he won't—maybe a lot of these fine boys of ours won't come back. They say we must suffer heavy casualties before the war is won—that a bit later, the war may cost 100,000 lives each month.

I hope I don't have to read in the papers tonight some story about a strike, or a WLB squabble, or bickerings about farm parities, or feuding between WPB, OPA, and ANMB.

I feel pretty low—and that sort of reading won't do me any good—and it won't do Dan and all those other kids and their red-eyed fathers and mothers any good either.

Rubber to the rescue when a battleship gets the shakes

A typical example of B. F. Goodrich development in rubber

WHEN a battleship fires her biggest guns she shivers like a human with a chill. From keel to crow's nest every ounce of her 35,000 tons is shaken by the force of the explosion. It used to be that some of the sensitive instruments—fire control and steering mechanisms, submarine and plane detectors, a number of other delicate devices—were jolted so hard that they were thrown out of kilter. Readings on dials weren't always accurate. The safety of ships and men might be endangered.

Before the war B. F. Goodrich research engineers had developed Vibro-insulators which used rubber in a new way. Vibro-insulators can support industrial machines as though they are hanging or floating. Rubber layers are sandwiched between metal plates, which are held so that the weight of the machine gives a slight pulling or twisting action to the rubber. This way the rubber can absorb more shock and vibration than when it is under compression.

Vibro-insulators were adapted for use on the battleship instruments. They provided protection against the shocks and vibrations that had caused instruments installed in the old-fashioned way to break down. Today Vibro-insulators, by preventing such breakdowns, make our warships more effective fighting machines.

In ways like this B. F. Goodrich research contributes to the successful prosecution of the war. In similar ways this research will contribute better products made of rubber—natural and synthetic—when the peace comes. *The B. F. Goodrich Company, Industrial Products Div., Akron, O.*

B.F. Goodrich

RUBBER *and* SYNTHETIC *products*

THE PICTURES

14, 15—(left) Acme; 15—(right) Press Assn.; —War Dept.; 18—International News; 19, 2 Harris & Ewing; 29—International News; 3 Chicago Sun; 37—Wide World; 38—Ac 46—(lower) Ewing Galloway; 52—Acme; 7 Charles Phelps Cushing; 83—(lower) Ber Guth; 102—Press Assn.

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★ KEEP ON BUYING WAR BONDS ★

POSITIVE IDENTIFICATION—

important for Soldiers . . . and Checks

Today, every American Soldier wears TWO identical identification tags bearing his serial number, inoculation record and other essential data. » » Why TWO tags? Because Uncle Sam plays safe—takes no chances of slip-ups in the identification of personnel. » » For similar reasons of security, leading Banks and Business Houses today use checks which are DOUBLY IDENTIFIED! Not only is the issuing organization's name lithographed or printed on the check—but its trade-mark or special design *is repeated—front and back—in the check paper itself!* This individualized Safety Paper, originated by George La Monte & Son, is available through your lithographer or printer. » » Such DOUBLY IDENTIFIED checks offer maximum protection against alteration and counterfeiting.

...w the trade-mark design and ...es appear on the back of the ...is perfect register with the ...The endorsement is protected ... as the face.

LA MONTE *Safety* PAPER

GEORGE LA MONTE & SON

NUTLEY, N. J.

1871

The wavy lines are a La Monte trade-mark

GOT A DOLLAR on you? Pull it out of your pocket and take a good look at it. *There* is a piece of sound money. It's good anywhere in the world, and always has been.

But what about the currency of the occupied countries, France, Netherlands, Belgium and others? You could bring a bale of it into your bank today, and not get a cent for it. No one is willing to buy this money. The Guilder, for instance, was once one of the world's soundest monetary units. It was quoted at 53 cents before Holland was invaded. As this is written, this unwanted currency has an official exchange value of less than three quarters of a cent.

What are you going to do with that dollar in your pocket? How will you help maintain its worth and pr tige? Today there are fe ways of spending it, and ev dollar squandered contributes to the danger of inflati

The answer is, buy War Bonds. Only Victory can s the American dollar. And only adequate war financi can give American forces and their Allies what they m have to see the war through.

Unless your dollars join the fight, they may be worthless as Francs later on. If they go to war, the come back to you . . . with interest.

The choice should not be difficult.

This advertisement contributed by the York Corporation, York, Pa., to the U. S. Treasury Bond Campaign

WASHINGTON BULLETIN
WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

Labor Board's Dark Victory

The National War Labor Board's biggest victory is likely to be its last. When it held John L. Lewis' miners to a gain of 20¢ a day for the present at least (page 14), it climaxed an unparalleled record. Holding the rise in wage rates no less than the rise in the cost of living is something that has been done in no other one of the United Nations.

Under the Little Steel formula, NWLB has let wage rates rise only 15%, with minor exceptions, while living costs have been rising 25%. And it has preserved the Little Steel rule despite the man who wrecked NWLB's predecessor, the National Defense Mediation Board.

Nevertheless, the very rigidity of the board's stand has now left it in a nearly untenable position. Against Lewis, it was reinforced by the truce under which the "loyal" unions refrained from pressing wage demands on the promise that the general price structure would be rolled back. It was able to impute political motives to Lewis.

Bigger Drive Coming

This week it became obvious that there is going to be no rollback to pacify the unions, and the whole labor movement will start moving in on NWLB to demand the end of Little Steel.

The drive is spearheaded by the demands of the nonoperating railroad workers and by the pay-increase case of 1,200,000 shipyard workers which is soon due to come before the board. Fred M. Vinson, Director of Economic Stabilization, and an emergency railroad panel are now struggling with the rail men, following Vinson's veto of panel concessions on the ground that the rail workers are not entitled to anything under the Little Steel formula.

Cracking Force

Whether the railway men crack the formula or not, it will crack. Behind the shipyard workers stand the auto, steel, and other war industry unions. The WPB industry divisions themselves are beginning to urge higher wages lest production be slowed. And when NWLB labor members, who have voted against Little Steel decisions for six months, are convinced that President Roosevelt's rollback of prices is just peanuts, they will resign from the board.

Unless NWLB frees itself or is freed from the Little Steel formula, its remaining life, however praiseworthy, is pretty sure to be short.

▼

Davis' Terms

Chester Davis, War Food Administrator, is ready to walk the plank if he has to. He will remain on the job only on his own terms. Otherwise he will quit, even though it so angers Roosevelt as to endanger Davis' Federal Reserve job in St. Louis.

His terms are that the Office of Price Administration, Office of Defense Transportation, War Manpower Commission, War Production Board and Reconstruction Finance Corp. be forbidden to issue any orders affecting food and farm commodities without his prior approval.

Davis has been seething ever since the start of the price rollback program, which he knew nothing about until its public announcement by Price Administrator Prentiss Brown. He abandoned hope that he could do a real job on food when Roosevelt publicly disavowed any intention to partition OPA by switching food price control and rationing power to the War Food Administration.

PRESIDENT'S "OUT"

When the President offered an antistrike proposal of his own to counter the proponents of the Connally-Smith bill, the Roosevelt tongue was in the Roosevelt cheek. He knows that no restrictive labor measure that he would want to sign could get through the House without picking up everything he disliked in the political nightmares and administrative headaches of Connally-Smith.

His proposal comes down to a simple work-or-fight law to be applied at the discretion of the Commander-in-Chief. Empowering Selective Service to raise the draft age limit from its present 45 to 65 would permit him to attack future work stoppages by threatening to draft all participants. If over 38, they might be classified for noncombat military service, which might be work at the jobs they left to go on strike—at Army pay.

Ceiling on the Army

Widespread feeling that the Army is fighting the war a little too lavishly, is spending materials and money unnecessarily, has frequently found expression in such moves as the Maloney (Office of Civilian Requirements) bill to increase the civilians' share. But it was a shock to almost everyone last week when Sen. Walter F. George, chairman of the Finance Committee, proposed that military expenditures, scheduled at $100,000,000,000 in fiscal 1944 be put under a $75,000,000,000 ceiling.

It won't be done; if the generals say they need $100,000,000,000 to win the war, few congressmen would dare tell them they can't have it. But George is a man who never speaks lightly, and the military may hesitate about bringing in supplemental requests for money.

▼

Subsidy Politics

Partisan politics is shaping the Washington battle over subsidies to roll back prices and the broader battle as to whether inflation shall be rigidly or loosely controlled. Cold economic pressures lie at the root of the issue—pressures from the farmer, the workman, the merchant for the biggest share of the nation's goods. But it's politics that decides who favors what in Washington.

House Must Appease

With an election year coming on, the House, the Senate, and the Administration are each subjected to special pressures.

Every member of the House needs to get reelected next year. And he's got to be reelected from a small area where a few hundred well-organized votes can swing it one way or the other; what the country as a whole thinks of him doesn't help or hurt.

Nearly every voter has his own personal grievance against price control, which outweighs his general consumer's interest in a low cost of living. That is why the House tried to pulverize the OPA program. But when they voted to forbid any sort of subsidy, dozens of representatives were hoping the Senate would undo their work.

Senate Can Compromise

Only a third of the Senate membership faces the immediate prospect of an election campaign, and senators are re-

SHARPER EYES

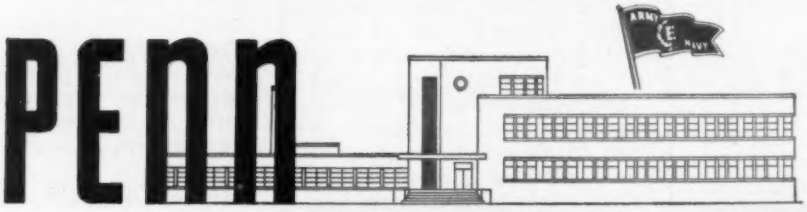
FOR THE ARMY AND NAVY

Winging deep into enemy territory, his plane unarmed and a camera lens his "bomb sight," the aerial photographer flies over his target ...snaps a shutter...and high tails for home with his precious film.

Safely back at the base, the film goes into the laboratory for processing...emerges to furnish the map for the next day's raid—or to reveal the damage inflicted by some previous bombing smash. Cameras are the "eyes" of army and navy Intelligence, vital to the success of a single foray or a whole campaign.

Refrigeration and air conditioning play an important part in sharpening these "eyes." Accurate control of temperature and humidity are important...to keep films flat and pliable...to prevent fogging and streaking...to condition fixing baths and control reactions in solutions.

Penn supplies automatic controls for these air conditioned photographic laboratories. We are proud that our experience and facilities have qualified us to furnish these instruments. Meeting these exacting requirements in accuracy and dependability, we are broadening an experience which will be reflected in future automatic control production for peace-time requirements. If you have a problem involving automatic control, consult our engineers, without obligation. *Penn Electric Switch Co., Goshen, Indiana.*



PENN

AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

ted from a broader constituency. Farm voters, who are in a position to fit handsomely from inflation, exer- a disproportionate weight in the ate, so that that body, too, is op- ed to the President's rollback pro- m. But the Senate is not forced by blic resentment into the same ex- nes as the House. That is why a mpromise subsidy plan is shaping up re.

The compromise, representing the st that the Administration now es to get, would OK the half billion ded to finance the token rollbacks meat, butter, and coffee already an- nced. It may also leave a legal open to a program of subsidies hout rollbacks—subsidies designed ply to hold present prices in the of rising costs. Having made a rd for their constituents, the repre- tatives may go along on the com- mise.

Such a compromise isn't as favorable the Administration as it looks. No eping program of hold-even sub- es will ever go through—once it's lized that these subsidies would cost about as much as the rollback ge 15). Nevertheless, hold-even sub- s would give the Administration ething to work with in the next e of its rearguard action against in- on.

sident's Hand Forced

Like the House and Senate, the Ad- nistration finds its position dictated the mechanics of politics. Only in sidential elections does the aver- voter put enough weight on broad es to balance his immediate per- al grievances; for instance, think of cost of living instead of what he's wed to charge for canned goods. e President can—as the congress- n can't—make his run on an issue holding down the cost of living.

Quite apart from any views he holds the long-term desirability of con- lling inflation, Roosevelt is pretty rly forced to make a run on that e. It's the only one available in ght with enough immediate per- al appeal to be played off against discontent he must inevitably face t year from a public that isn't eat- nearly as well as it would like to.

▼

sy on E's

Army and Navy are trying to discour- war contractors from blowing a lot dough in staging ceremonies incident award of Army-Navy E's. Such shows frequently staged by the company's advertising agency. So far as is known by the Army and Navy, no independent showman has been able to get a foothold in the business, although there has been at least one attempt.

▼

Bagful of Wool

The Dept. of Agriculture is holding the bag on a wool surplus.

WPB's restrictions on wool use—imposed when it feared interruption of imports from Australia—have largely been removed, but the woolen and worsted industries now find their output limited by the same manpower and equipment shortages that have plagued rayon and cotton all along. They can't consume the wool, and the already mountainous stockpile will grow till peace comes.

Wool growers, who have been afraid of just what has happened, succeeded in pressuring Agriculture into buying the entire domestic clip for the duration and two years thereafter at ceiling prices.

▼

New Gas Ration

A shakeup is imminent in gasoline and fuel oil rationing, with Petroleum Administrator Harold L. Ickes getting

The End of a Perfectionist's Day

Congress abolished the National Resources Planning Board because it wanted to repudiate in advance any postwar truck with New Dealism—deficit financing, planned economy, or whatever. NRPB stuck its neck out when it sponsored Alvin Hansen's pamphlet—"After the War—Full Employment"—which called for more and bigger deficits. But what really pulled it down were the implications its very name had acquired among anti-New Dealers as a symbol of radicalism and economic regimentation. Actually, the board never lived up to its bureaucratic reputation—which is why its friends have taken a rather condescending attitude toward it.

Checkered History

Officially, NRPB was an economic braintrust for the President. But the real braintrusting has always been done by more flexible unofficial groups, and the board has become a sort of government-financed New Dealist Brookings Institution or Twentieth Century Fund. Its findings bear the government stamp but actually carry no more weight than those of any scholarly foundation.

The Federal Stabilization Board, its first incarnation, was set up in 1931 to develop a theory of contracyclical public works; it was ordered by Congress to tip off the President whenever a depression hove in sight so that he could step up the level of public works to offset it. But it didn't take the board long to decide that contracyclical public works would provide only the most feeble answer to the problem of depressions.

Consequently, it developed a dual personality. On the one hand, it tried for ten years to develop some procedure for the programing of federal public works; on the other, it produced a series of reports on basic economic subjects—technological trends, urbanism, unemployment relief, transportation — liberal, cautiously phrased reports too vague and verbose to stir either much fear or more enthusiasm.

To Its Credit

The board has some accomplishments to its credit: It thrashed out a working agreement among Agriculture, Reclamation, and the War Dept. on the handling of multipurpose hydro projects; several of its regional reports formed the basis of interstate river-sharing agreements; it gave technical help in some municipal works planning. Its most ambitious project, establishment of a lot of regional authorities on the order of the Tennessee Valley Authority, got Presidential support but a congressional slapdown. In 1939, the board finally got authority in an executive order to work with the Budget Bureau in formulating an official six-year plan of public works, but the war stopped this just as it got going.

Few of the NRPB's economic studies have had any significant effect on Administration policy or legislation. Perhaps its one really influential job will prove to have been its last—the massive double-barreled report on social security and a postwar economy of mixed public and private ownership. This may turn out to be the platform of the next New Deal, if the next New Deal has any platform other than a tilted cigarette-holder and "My fre-e-e-nz. . . ."

WASHINGTON BULLETIN (Continued)

more say in policy making. Details are still being worked on, but general principles have been approved by War Production Board Chairman Donald Nelson. This accounted for his statement this week that the eastern supply of gasoline and fuel oil for essential uses soon will improve.

Key to the new program is cancellation of all outstanding ration coupons for gasoline and establishment of a combined control over supplies. Not only sales to civilians will be regulated by a new ration setup, but also distribution of gasoline throughout the country will be controlled from the source. OPA will continue to handle consumer rationing, and Ickes will control supplies, but the two will be coordinated.

By the Year?

Only answer to the gasoline black market, especially in District 1, Ickes believes, is withdrawal of all outstanding coupons and a new start from scratch. New rations will be distributed for a long period, possibly a full year, to permit accurate planning for the distribution of available supplies.

Subsequent supplemental rations will be extremely difficult, if not impossible, to get. Strict accounting will be made of all coupons disbursed in the hope of keeping enough gasoline in the bank to meet outstanding checks.

Still Apart on Price

Although Ickes will win a partial victory in his fight for oil rationing authority, he is making little headway in his move to get oil price control. Price Administrator Prentiss Brown is standing fast against an over-all price increase for crude petroleum. Meanwhile, OPA has granted some forty-five specific increases in crude prices, mostly to remove differentials in individual fields and pools. This has definitely helped Brown's delaying tactics in the oil price controversy. But he hasn't won the fight yet.

▼

Raw Material Hot Spots

Biggest clouds on the raw material supply horizon hang over steel and copper.

WPB is now bearing down hard for at least an additional 1,000,000 tons of ingot steel in the third quarter: 350,000 tons from stepped-up expansion of furnace capacity; 300,000 from pushing present furnaces harder; 300,000 tons plus to be obtained from consumer inventories by refusing further allotments until these stocks are drawn down.

The war production agency is trying to boost copper supply 10%, if possible 20% (page 113); release of hard rock miners from the Army will help.

It thinks there is enough aluminum but extrusions and forgings are still short. Alumina capacity will be expanded next year as an insurance policy if the size of bombers continues to go up.

Components are improving but are still pretty tight for new combat and merchant ships; same is true of valves and compressors for high-octane gas.

▼

To Cancel Argentine Licenses?

Cancellation of all outstanding licenses on exports to Argentina is being considered by the Board of Economic Warfare. BEW is convinced that Argentine trade is in a hopeless mess, that large quantities of goods are reaching firms blacklisted for Axis sympathies, that profiteering is rampant.

Plan being considered is to wipe out all licenses, start granting new ones only after rigid investigation of the consignees.

Censored Business

War Food Administration recently dropped plans to purchase 5,000 tons of casein in Argentina when it learned that an importer had got wind of its intention. The Office of Censorship had intercepted the importer's instructions to his Argentine agent to corner the supply.

"Intercepts" is government jargon for excerpts of incoming and outgoing foreign business, personal, and political communications netted, copied, transcribed, and distributed by the Office of Censorship among interested government agencies. The censors operate at monitor points for international mail, cables, airgrams, and telephone conversations.

Government correspondence is netted too, presumably so that each federal agency can find out what other federal agencies are doing.

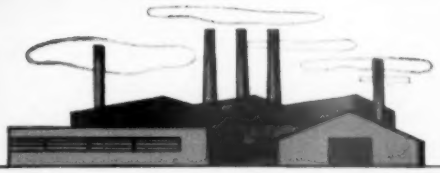
▼

Capital Gains (and Losses)

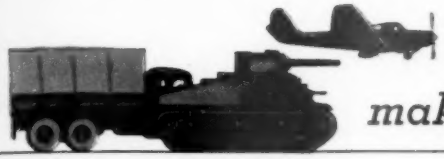
Whisky distillers who are turning out war alcohol are up in arms because WPB is withholding approval of Army-Navy E pennants to them. They suspect WPB is sitting on their awards until commercial alcohol distillers can show comparable performance.

—*Business Week's Washington Bureau*

Gulf Service Engineers



are helping War Industry



make better weapons, faster!

*Read these case histories:**

Machine Gun Parts . . . A manufacturer of machine gun parts of S.A.E. 1355 Steel consulted a Gulf Lubrication Service Engineer, who recommended the proper Gulf Cutting Oils for various machining operations. Result: Production increased 300%, tool life increased 300%, and a marked improvement in finish.

★

57 Mm. A.P. Shot . . . A manufacturer of 57 mm. armor piercing shot, troubled with high rejections for finish and short tool life in drilling and reaming operations, called in a Gulf Lubrication Service Engineer, who prescribed the proper Gulf Cutting Oil for the job. Result: Finish improved to such an extent that rejections were eliminated, 100% increase in production, 3500% increase in tool life.

★

Airplane Radio Covers . . . A manufacturer of cast aluminum covers for military airplane radios called in a Gulf Lubrication Service Engineer for consultation on the problem of frequent cracking during a tapping operation. The Gulf Service Engineer recommended Gulf Cut-Aid. Result: Rejections entirely eliminated, production increased 20%.

Bomb Striker Nuts . . . Troubled by inability to get into production, a manufacturer of striker nuts for bombs called in a Gulf Lubrication Service Engineer, who recommended the proper Gulf Cutting Oil and a tool change. Result: Parts produced immediately passed inspection and the plant went into full production.

★

Tank Parts . . . Consulted on the problem of improving cutting efficiency in the machining of an important tank part on turret lathes, a Gulf Lubrication Service Engineer recommended the proper Gulf Cutting Oil for the job. Result: Production increased 30%, finish materially improved.

★

Marine Journal Boxes . . . A manufacturer of hardened bronze journal boxes for marine service called in a Gulf Lubrication Service Engineer for consultation. The Gulf Service Engineer prescribed Gulf Cut-Aid. Result: Production increased 100%, drill life improved 1800%, a counterboring operation eliminated.

**Additional details on any of these case histories supplied upon request.*

GULF OIL CORPORATION · GULF REFINING COMPANY
GULF BUILDING · PITTSBURGH, PA.

Call in a Gulf Lubrication Service Engineer to help step up your production

GULF INDUSTRIAL LUBRICATION

FREE!

Operation and Maintenance Tips for lifting magnet operators

How to Make Magnets Lift More, Work Faster and Last Longer

13 suggestions proved by experts, in simple, clear language with graphic pictures telling just what to do and what not to do.

8" by 20" CARD

to be hung in Magnet crane cab

Card printed in two colors on heavy, durable bristol card stock.

Because every pound of iron and steel and copper is vital, because every speed-up in handling and production will shorten the course of this war, lifting magnets should be handled carefully to preserve them, yet expertly to get the utmost out of them. That is why Cutler-Hammer has prepared this card.

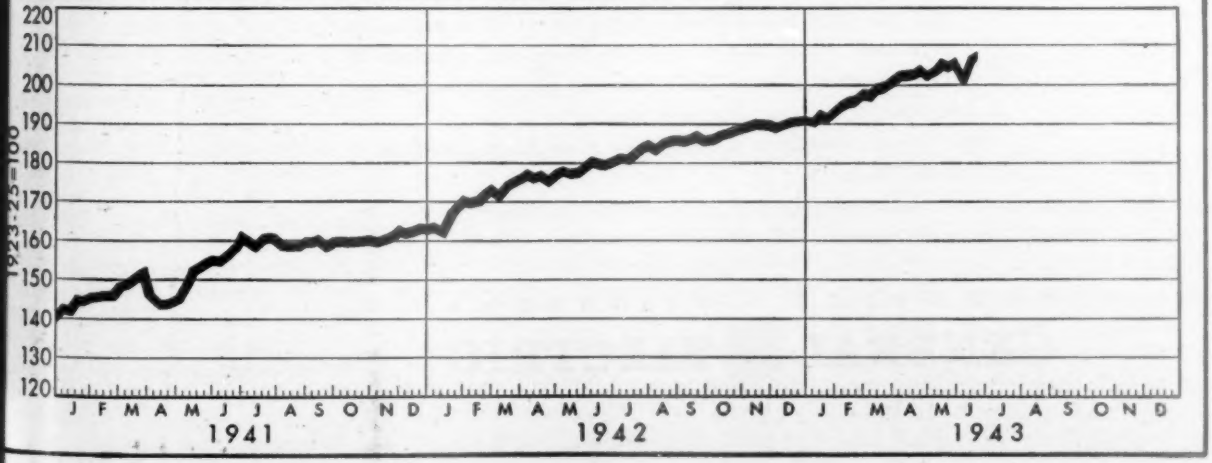
If you want a sample or a supply, write today. It is free, a Cutler-Hammer contribution to the common cause of speeding production and conserving critical material and manpower. Simply address CUTLER-HAMMER, Inc., 1419 St. Paul Avenue, Milwaukee, Wisconsin. *Associate:* Canadian Cutler-Hammer, Ltd., Toronto, Ontario.

FIGURES OF THE WEEK

	§ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below)	*208.2	†207.2	205.8	191.5	180.6
PRODUCTION					
Steel Ingot Operations (% of capacity)	97.6	97.8	99.3	98.1	98.0
Production of Automobiles and Trucks	19,080	19,065	19,175	15,660	23,225
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)	$11,934	$11,618	$11,402	$12,927	$42,128
Electric Power Output (million kilowatt-hours)	4,098	4,040	3,992	3,976	3,434
Crude Oil (daily average, 1,000 bbls.)	3,966	3,988	4,006	3,892	3,721
Bituminous Coal (daily average, 1,000 tons)	1,954	†524	2,050	1,944	1,867
TRADE					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars)	80	81	80	74	78
All Other Carloadings (daily average, 1,000 cars)	62	41	61	49	60
Money in Circulation (Wednesday series, millions)	$17,189	$17,237	$16,795	$15,092	$12,208
Department Store Sales (change from same week of preceding year)	+28%	†+2%	+16%	+17%	−3%
Business Failures (Dun & Bradstreet, number)	78	54	47	115	180
PRICES (Average for the week)					
Spot Commodity Index (Moody's, Dec. 31, 1931 = 100)	243.6	244.8	245.8	238.4	229.4
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	159.7	159.8	160.1	156.2	154.1
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	208.2	208.7	207.6	193.8	180.3
‡Finished Steel Composite (Steel, ton)	$56.73	$56.73	$56.73	$56.73	$56.73
‡Scrap Steel Composite (Iron Age, ton)	$19.17	$19.17	$19.17	$19.17	$19.17
‡Copper (electrolytic, Connecticut Valley, lb.)	12.000¢	12.000¢	12.000¢	12.000¢	12.000¢
Wheat (No. 2, hard winter, Kansas City, bu.)	$1.37	$1.38	$1.38	$1.31	$1.14
‡Sugar (raw, delivered New York, lb.)	3.74¢	3.74¢	3.74¢	3.74¢	3.74¢
Cotton (middling, ten designated markets, lb.)	21.06¢	21.10¢	21.22¢	19.74¢	19.00¢
‡Wool Tops (New York, lb.)	$1.357	$1.354	$1.345	$1.220	$1,191
‡Rubber (ribbed smoked sheets, New York, lb.)	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
FINANCE					
90 Stocks, Price Index (Standard & Poor's Corp.)	95.0	95.4	94.6	76.9	66.2
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's)	3.88%	3.89%	3.90%	4.27%	4.34%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's)	2.72%	2.72%	2.74%	2.82%	2.84%
U. S. Bond Yield (average of all taxable issues due or callable after twelve years)	2.28%	2.30%	2.30%	2.36%	2.32%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate)	½–1%	½–1%	½–1%	½–1%	½–1%
BANKING (Millions of dollars)					
Demand Deposits Adjusted, reporting member banks	32,787	32,061	30,652	29,120	26,058
Total Loans and Investments, reporting member banks	46,965	46,808	47,368	39,829	31,677
‡Commercial and Agricultural Loans, reporting member banks	5,625	5,637	5,745	6,350	6,906
Securities Loans, reporting member banks	1,457	1,448	1,751	1,137	838
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks	34,251	34,141	34,215	26,317	17,364
Other Securities Held, reporting member banks	3,065	3,077	3,079	3,283	3,537
Excess Reserves, all member banks (Wednesday series)	1,630	1,510	1,638	2,637	2,791
Total Federal Reserve Credit Outstanding (Wednesday series)	7,089	6,998	6,434	6,055	2,803

*Preliminary, week ended June 19th. †Revised. ‡Series revised, now includes open market paper.
Ceiling fixed by government. §Date for "Latest Week" on each series on request.

BUSINESS WEEK INDEX OF BUSINESS ACTIVITY



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PLASTICS DIVISIONS

GENERAL ELECTRIC

FD-7

THE OUTLOOK

Manpower Drain to Lessen

Better-than-expected war experience with airpower, ship sinkings, and Army casualties reduced draft quotas. But production is still being strained, profits squeezed.

Business Week's Index for last week hit 208.2. This week's Index will drop, due to the coal strike. And the Index is likely to fall just short of the predicted 210 level for midyear, because of the accumulated effects of the bituminous stoppages on steel and so, in turn, on munitions lines.

Rechecking the Draft

Prospects for the second half, however, have improved. The key is manpower. By now, it is apparent that inductions into the armed forces, particularly in the second half, will be substantially less than previously expected. Sen. Burton K. Wheeler said this week that he had been told that quotas had been cut by more than one-third from August on. This bears out the comment of Under Secretary of War Robert P. Patterson that a reduction in the previous goals for the armed forces is "under study." And, the Army itself officially estimated last week that it would have 8,200,000 persons on Dec. 30, including 200,000 women—as against the original bogey of 8,200,000 men plus 200,000 women.

However much total goals are being cut—by at least 250,000 and perhaps by as much as 750,000—inductions are down on another count. Fewer replacements are needed than had been figured. Not all the over-38-year-old service men have been willing or able to leave the forces. And casualties have, so far, been less than anticipated, with expectations also revised downward.

Less Drain on Manpower

All this adds up to a considerably smaller drain on employed manpower.

Also, the incidence of the draft levy has been altered, largely to the benefit of fathers. Recently, quotas for Negroes were upped, physical requirements were lowered slightly, and occupational deferments for young men under 25 restricted. Maj. Gen. Lewis B. Hershey, Selective Service Director, has indicated that he hopes for further moves in this direction, including the induction of single farmers now deferred.

One reason for the easing in the draft is the belated realization of its impact on production—on munitions specifically.

But, also, the war background has changed. For one thing, casualties in Tunisia were low. Also, the growing confidence in air power—based on the conquest of Pantelleria and on the havoc wrought to Nazi industry—has built hopes that victory can be bought cheaply in terms of lives.

Finally, shipping capacity has expanded more than had been figured (BW—May15'43,p15). Lt. Gen. Brehon Somervell some time ago asserted that we were less short of ships than of material to load in them (BW—May1'43, p13). Now, War Shipping Administration executives are quoted to the same effect. Whatever the validity of such claims heretofore, they find support in the outlook for the second half of the year.

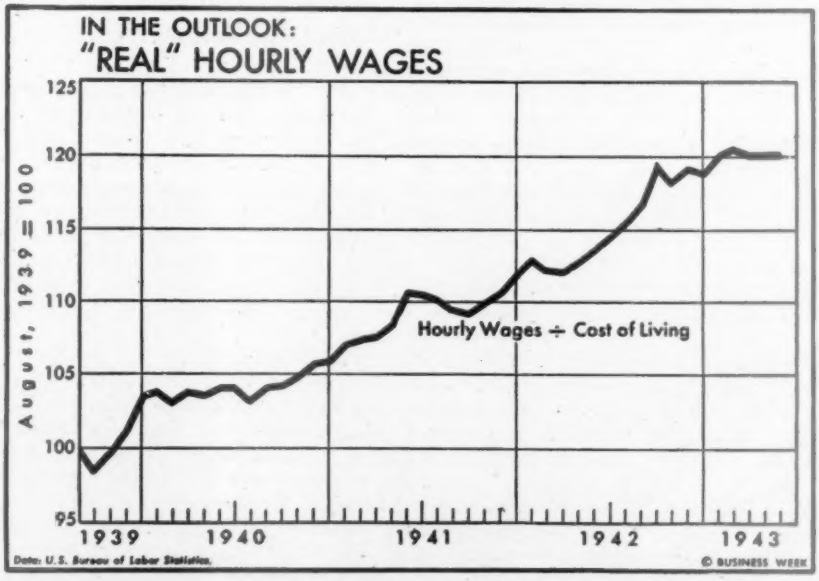
Wanted Overseas

First-half ship sinkings came to less than expectations and amounted to far less than the almost 10,000,000 deadweight tons of Allied building. Between last December and now, perhaps 15% was added to United Nations ship capacity. From now to the year-end, probably another 25% will be gained. The military, therefore, can send American troops and their equipment overseas faster than expected. Also, a French army of 500,000, including auxiliaries, has been added to the Allied side, and it must be supplied (BW—Jun.19'43,p7). In short, the thing now is to get trained soldiers and critical munitions to the fronts and not tie them up at home in the training of new divisions.

More Room for Arms

Additional implications emerge. The increased ship capacity which means a smaller draft also requires stepped-up armament production—which the military is now demanding. Draft quotas will depend on future losses in both ships and casualties. And shipbuilding may some time outrun other phases of the war program, requiring it to be cut back (BW—Feb.13'43,p14).

These complex shifts may slow or speed, but won't halt, basic domestic trends. Outstanding among these is the mounting strain on the production machine—pointed up in another, and peculiarly interesting industry, by this week's War Production Board order



While the chart seems to show that factory workers' hourly wages have been holding their own against the rising cost of living since last September, study of facts behind the figures indicates the basis for mounting wage demands (page 15). The statistical wage averages are artificially lifted by (1) transfers from low-rate, less-essential lines to high-wage war industries, (2) the increasing importance of time-and-a-half overtime payments, (3) approved raises in low-pay industries. The basic hourly wage rates in most industries, therefore, have lagged behind living costs.

Many have been John L. Lewis' press conferences in recent weeks, but the coal miners' boss figures he now has made his last headlines of the summer. But next October, when his coal truce ends and the A.F.L. meets to consider readmitting the miners, he'll make headlines again.

banning use of paperboard cartons for carrying soft drinks. Though the order will save a mere 0.2% of annual paperboard tonnage, it does evidence a worsening shortage of the packaging material.

This is the second time in the war that paperboard has threatened to run short. A previous—and false—scare came in late 1941. At that time, consumers went on a hoarding spree, jumping operations to 99% of capacity. When demand collapsed, the industry dropped down to a 66% rate just a year ago (BW—Jun.20'42,p13). Since then, increased demand—particularly to substitute paperboard for tin—has boosted operations up to 95% of capacity.

Now, supplies are tight—and not only because of near-capacity operations. A dearth of labor in the forests has cut pulp production (BW—Jun.19'43,p13), in turn hitting newsprint; both waste newsprint and pulp are raw materials for paperboard. In addition, the industry's manpower pool may yet be lowered.

Earnings Show Pinch

Incidentally, the price-cost squeeze on profits is beginning to show up in corporate balance sheets, now that overall volume is beginning to flatten out. Dept. of Commerce profits estimates for the first quarter (page 111) reveal smaller earnings totals—computed both before taxes and after taxes—than in the last quarter of 1942. Though such quarter-to-quarter comparisons are subject to statistical reservations, this drop does foreshadow the shape of things to come over the next year.

The Score on Coal

Both Lewis and operators lost, but no gains have been clinched. In October, it may be John L. and the A.F.L.

Anyone who wants to tot up profit and loss in the coal dispute must begin by deciding how much weight to give to each of the following factors:

(1) **The miners,** participating in three stoppages, lost an average of nine days work. They got a $30 boost in annual vacation pay and a 20-cent-a-day wage increase in the form of free equipment and service for which they formerly paid.

(2) **John L. Lewis** lost his fight for a general wage increase and for portal-to-portal pay. He won his fight to avoid the National War Labor Board and to ignore its authority. He is the first and only man thus far to have persisted in defying the board. By refusing to sign a contract with the operators, as NWLB has directed, while the board bows out of the case he can claim an unprecedented, albeit purely technical, victory.

(3) **The National War Labor Board** has beaten back the fiercest assault yet launched on the Little Steel formula and the wage control program.

(4) **The coal operators** have held their wage bill down but have lost control of their properties for as long as Lewis chooses to continue making strike threats. The operators also face the prospect of protracted litigation over back-pay claims for portal-to-portal time under the Wage-Hour Act.

(5) **Industrial production** lost tremendous coal stockpile tonnage and an unestimated but significant amount of actual output.

(6) **The antiunion bloc** in Congress used the indignation churned up by the strike to push through to the White House the most drastically repressive labor measure ever to be approved by both House and Senate.

(7) **The President** won time by beating Lewis' $2-a-day demand. But the strike made it evident that, unless the cost of living is held, labor trouble will be war production's prime hazard.

But it is not yet possible to strike a final balance. Interior Secretary Harold L. Ickes, who will run the mines for the government, is considering the creation of a commission which will study the portal-to-portal issue and prepare a report by Oct. 31, the date when the latest Lewis-issued truce expires. The findings of such a commission will be certain to be the basis for further collective bargaining over coal wages. In the interim, Lewis is planning to start legal action for back pay on portal-to-portal time dating back to the passage of the Wage-Hour Act in 1938.

• **Strategic Retreat**—Thus it is impossible to hold that the coal dispute is settled or even that the key issue in the controversy has been disposed of. Lewis has made what he considers a strategic retreat so that he might fight again another day. He has left himself in a position to take a lion's share of the advantage that will accrue to organized labor when the Little Steel formula is cracked by someone else (page 5), for the agreement under which the mines now operate provides that any wage adjustment which the miners eventually get will be retroactive to Apr. 1. Lewis is only one of a legion who feel certain that the Little Steel pay terminal will be only a memory by next October.

• **Next Time, the A.F.L.**—Meanwhile, preparations for Lewis' return to the American Federation of Labor are proceeding. Some important opposition has been liquidated by the "reasonableness" the mine workers' boss showed in calling off his strike and thereby easing the pressure that had been put on the President to sign the Connally-Smith antistrike bill. When the A.F.L. meets in convention the first week in October, Lewis and an imminent coal strike deadline will dominate the scene. He may tie his miners into some grand strategy designed to rip away whatever shreds of wage control may still be in effect. Or, if labor has been appeased and collaboration is the order of the day, Lewis may trade his promise to go along for the A.F.L. presidency—not for himself, perhaps, but for his candidate.

Subsidies or Wage Boosts

That's the Administration line in the battle of F. D. R. vs. Congress, but its hopes are fading. In the background, the unions and the farmers are clearing for action.

Administration hopes that it can hold down the cost of living by subsidies and so avert further wage boosts are now fading. The House already has voted to deprive OPA of the power to use price-dampers. The Senate currently shows little inclination to fork over more than a token $500,000,000 for rolling back meat-butter-coffee prices 10%.

• **Too Small to Suit**—Trouble with this token rollback—even if it materializes—is that it is too small to suit the unions. In terms of the total cost of living, it amounts to only 1%. By contrast, the C. of L. has risen 25% since January 1941, base date of the Little Steel 15% wage-increase formula. And that means that a $500,000,000 subsidy still leaves the unions 9% behind in their percentage race with the C. of L.

The unions appear willing to settle for a 5% rollback, but this would require subsidies of $2,000,000,000. Conversely, a 5% wage boost would mean additional payments to labor of about $5,000,000,000 annually.

Administration circles are now trying to sell Congress on the idea that it is cheaper to pay out $2,000,000,000 in subsidies than tolerate a potential $5,000,000,000 spurt in wages, especially since wage demands are usually accompanied by widespread work stoppages. There is, of course, the possibility that the unions would conveniently overlook the continuing rise in the cost of living (as all of them, except John L. Lewis', have done to date), but that possibility is just about at an end: Prices keep rising month by month. Furthermore, the unions are evolving a new argument: that neither in Great Britain nor in Canada have wage rates been allowed to drift so far behind the trend of prices.

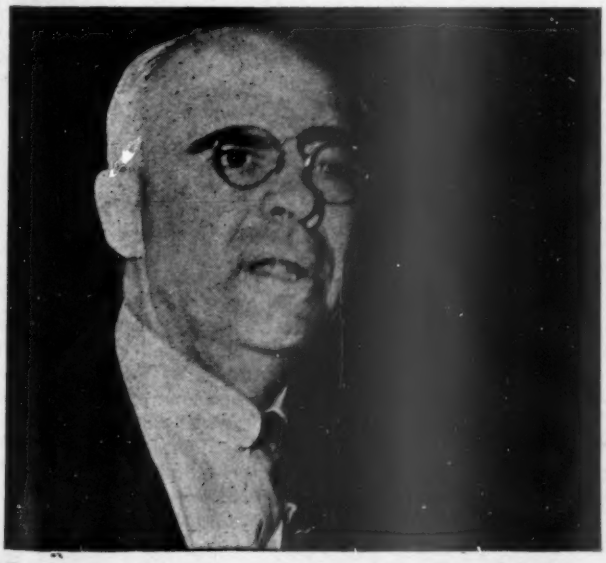
• **Poor Selling Job**—To date, the Administration's subsidy sales work on Congress has been very poor. Lou Maxon, head of OPA's Information Unit, wasn't even in Washington when the fireworks started (he was on a three-week leave while Prentiss M. Brown was supposed to be figuring out if Maxon should get the OPA general manager post). Without public relations advice, OPA's economists had no outlet for their side of the argument, with the result that Congress didn't even have to go through the motions of being rational in killing any broad subsidy program.

• **How to Beat the Game**—Congressional hate of price-dampers stems from the traditional belief among farmers and merchants that they can beat the inflation game. Economists agree that this belief is more than mere fiction, at least under the present price-control setup. Currently farm prices are relatively free, while the prices of finished goods are relatively fixed, with the result that the farmer is enjoying (1) 115% of parity levels, and (2) the chance to pay off old debts in depreciated dollars. Merchants and manufacturers, meantime, are in the position of (1) commanding a price that is favorable, on the average, vis-a-vis wage rates, and (2) trading-up their civilian merchandise so that fewer units are sold at greater profits. If price controls were removed entirely, the farmer's favorable position would still continue (until eventual deflation), especially so far as the paying off of old debts is concerned. Merchants and manufacturers, too, might hold their own, though in the end they might run the risk of the stigma of "profiteers."

Basically, the Administration is opposed to this pattern for two reasons. The primary reason is the fear that the race between prices and wage rates will result in strikes and decreased production. The secondary reason is that approximately 6,000,000 government employees (national, state, and local), 3,000,000 recipients of public assistance, 850,000 veterans, plus assorted white-collar workers and coupon-clippers are stuck with fixed incomes when prices are rising. The losses of this group become the gains of the free-moving groups, hence war morale is impaired.

• **Administration's Theory**—The Administration's theory of subsidies is that they would solidly tie wages and prices together, while preventing a further reduction in fixed incomes. This procedure would involve rolling back the cost-of-living about 5% at a cost of $2,000,000,000 or upwards annually (depending on how far the rollback has to be carried for bargaining purposes with the unions). Thereafter, wage rates would match the Little Steel formula well enough for practical purposes, and an ironclad principle would be set up for the duration.

Meantime, the annual $2,000,000,-



Day by day, the argument between War Food Administrator Chester C. Davis (left) and Price Administrator Prentiss M. Brown gets more vocal. Brown wants subsidies to roll back prices; Davis wants prices adjusted to bring out the food. And Davis, seeking to wrest price control over foods from OPA, says bungling threatens chaos.

000 subsidy would become an irrevocable wartime expense, augmented whenever marginal production costs showed signs of affecting prices. The mechanics of the subsidies would involve (1) government purchase of an entire crop or output for resale at lower prices, (2) partial purchases for resale at lower prices, (3) direct payments to induce production but keep prices from rising, and (4) government absorption of service costs, such as higher insurance and transportation charges.

But if Congress is dead set against this strategy, wages are bound to rise. The White House Braintrust then sees no alternative but to scrap the Little Steel formula.

In that case, a 5% wage rise would immediately affect production costs (and prices). Furthermore, the farmer's cost of doing business would be on the upgrade, so that parity would take a jump, thereby driving up retail food prices. By that time, the unions would demand another wage increase, and with that, the cycle would start all over again.

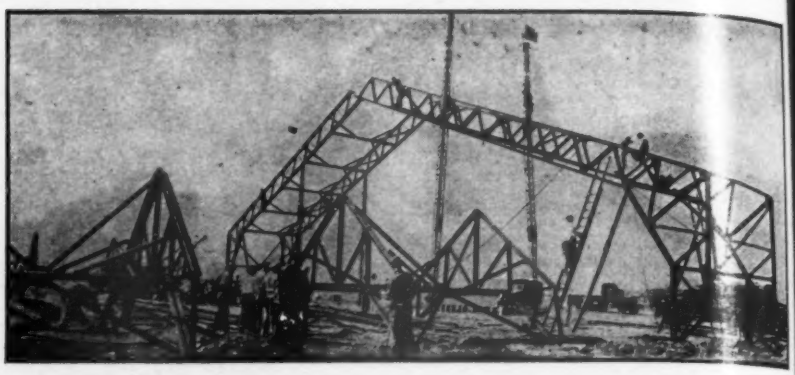
• **Wages—Then Farm Prices**—Whether the rise in prices that now seems to be in the making will be as big or as broad as it adds up to on paper will depend on Administration in-fighting—the improvisations, stalls, and rearguard actions for which the White House has become famous (page 5). No matter what happens, however, some measure of increase is inevitable.

And with the unions getting higher wages, it seems just as inevitable that the farm bloc will revive legislation to loosen up the parity concept. The Pace and Bankhead bills (one of which would add labor costs to parity calculations, and the other remove benefit payments from what's due the farmer) are still kicking around. In the event of increased wage payments, however, these bills would probably be too mild, would be rewritten to assure still higher farm income.

CASTORIA COMES BACK

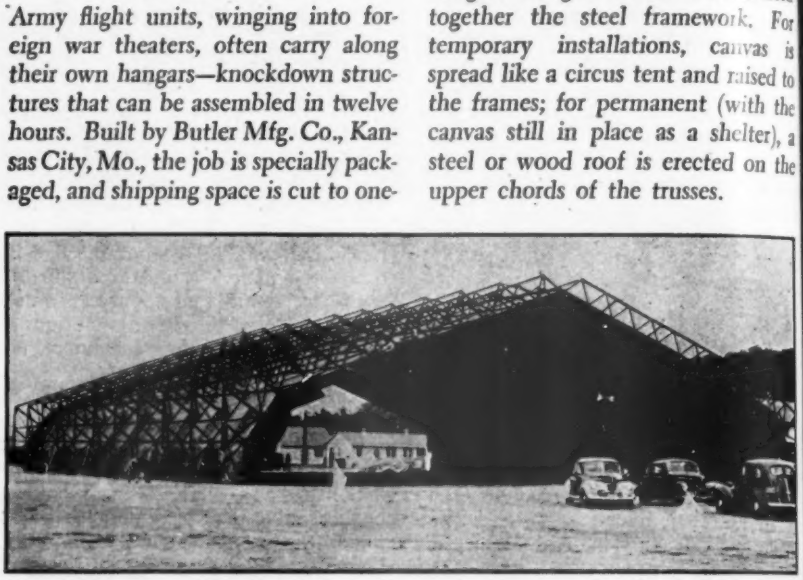
Centaur Co.'s research staff has finally uncovered the irritant that caused nausea in babies dosed with Fletcher's Castoria of recent manufacture (BW—May 15'43,p98). A means has been found to correct the trouble, and production of Castoria is being resumed this week—after seven weeks' suspension. When bottles of the new product reach the public about the middle of September, packages will have a green band instead of the familiar buff to distinguish them from any leftovers of the faulty batch which might still be lying around.

As suspected, the irritant resulted from the combination of a reduced sugar content and an obscure chemical condition in the water supply of the company's Rahway (N.J.) plant.



HASTY HANGAR

Army flight units, winging into foreign war theaters, often carry along their own hangars—knockdown structures that can be assembled in twelve hours. Built by Butler Mfg. Co., Kansas City, Mo., the job is specially packaged, and shipping space is cut to one-tenth that required for an arch-type hangar. Hinges and drift bolts hold together the steel framework. For temporary installations, canvas is spread like a circus tent and raised to the frames; for permanent (with the canvas still in place as a shelter), a steel or wood roof is erected on the upper chords of the trusses.



Ending Contracts

Auto makers name group to draft plans for winding up war business quickly when the time for reconversion comes.

Still unsatisfied with current proposals for termination of war contracts, the powerful automobile industry has decided to draw up its own program. After studying various drafts of the uniform termination clause suggested by government procurement agencies (BW—May15'43,p17), the Automotive Council for War Production has just appointed a committee to write an alternate formula.

• **In Key Position**—Automobile manufacturers feel that they have a bigger stake in the government's termination policy than any other industry. The size of their war contracts and their importance to the country's peacetime economy put them in a key position. Their proposals are certain to carry a lot of weight with government officials.

Membership of the committee on termination shows how seriously Detroit is taking the problem. J. H. Marks, Packard vice-president, is chairman. Other members are senior officials of top manufacturing companies, suppliers, and tool makers.

• **Two-Part Problem**—The job that faces this committee is the same one procurement officers have tackled in their attempts to write a uniform termination clause for government contracts. In general, it is to plan cancellations and settlement procedure so that when the war ends, industry will be able to convert to civilian production without losing time or risking bankruptcy.

As Detroit sees it, the problem breaks down into two parts. First, manufacturers want to be sure that all their contractual obligations will be canceled at once, leaving them free to start immediate reconversion. At the same time, they want to set up a plan for quick cash settlements that will provide capital for liquidating subcontracts and converting plants to passenger car production. If the government's termination program falls down on either point, reconversion might turn into a slow, expensive process. And that might mean that the expected postwar boom

in consumer goods would be punctured before it started.

• **What About DPC Machines?**—One of the committee's biggest headaches will be figuring out what to do with machinery and equipment owned by the Defense Plant Corp. Manufacturers say they won't be able to install passenger car assembly lines until they get DPC machinery out of their shops, but most of them have no other place to keep it. At present, there is practically no empty warehouse or arsenal space, and it isn't likely that there will be a great deal more at the end of the war.

Even tougher than this mechanical problem is the financial side of contract termination. Auditors already get the fidgets when they think of the accounting it will take to figure costs on work in progress under uncompleted contracts. In the automobile industry, this will be a particularly complicated job because of the variety of products.

• **Tangle on Subcontracts**—However, manufacturers think the biggest problem of all will be straightening out the intricate network of subcontracts and sub-subcontracts that spreads through the industry. If the government negotiates settlements with prime contractors alone, there will be a long delay before termination payments filter down to second- and third-tier subcontractors. On the other hand, if the government negotiates directly with all subcontractors, there will be so many cases that the process will string out indefinitely.

A possible solution, backed by several of the big companies, would be to pay each prime contractor a fixed percentage on his claim as soon as he files a rough estimate of what is coming to him. This would give him enough cash to pay off subcontractors and start reconversion while auditors worked out the exact settlement.

Procurement officials are sympathetic to this idea, and in several recent terminations, they have allowed a 50% immediate settlement. Auto manufacturers think postwar liquidation will require a much bigger percentage.

AIRLINE HEARINGS REOPEN

Policy on postwar air routes isn't going to wait until after the war. The Civil Aeronautics Board arrived at this decision early this week, declaring that it would consider now the applications that have been piling up ever since December, 1941, when hearings on new routes were abandoned.

Hearings on the 292 applications for domestic air routes and extensions are mostly for the protection of existing operators whose investments depend on their ability to make postwar plans. Examiners are bracing themselves, however, against a downpour of applications from new companies and promoters.

CAB, at its discretion, will confine hearings to selected applications, and will not open the subject of postwar international routes. Approval of a domestic application will not mean that the operation can start.

UNITED FRONT

To what degree war makes strange bedfellows is demonstrated vividly in Canada where a triumvirate of peacetime competitors—Ford, General Motors, and Chrysler—work hand in glove to produce military vehicles. Last week, the 500,000th war vehicle (above) produced by the companies' joint effort rolled off the assembly line of G.M.'s Oshawa (Ont.) plant—assembled by mechanics from all three firms with American-born Munitions and Supply Minister C. D. Howe tightening up the wheel rim bolts. Canada's automotive industry has shared facilities, pooled production secrets, and succeeded in standardizing military equipment.

For More Profits

Machine tools and textiles press for liberalization of the renegotiation law; distributors fight for exemption.

The machine tool and textile industries are building up pressure in Congress to liberalize the contract renegotiation law. Their argument is that profits in these industries (notably machine tools) are pretty skimpy in peacetime, hence it's unfair for the government to slice the wartime cake too thin. Should these arguments succeed in gaining any official sympathy, it's a sure bet that half a dozen other industries will want to be beneficiaries of a changed law, too.

• **Putting Fat on the Bones**—Meantime, war contractors in general are increasingly concerned over building up postwar conversion reserves and want the existing statute altered so that the renegotiators can't take away necessary seed money.

Noting the business man's frame of mind, two congressional committees are cranking up new contract renegotiation investigations barely three months after the Truman committee (page 19) finished hashing over the whole situation (BW—Apr.10'43,p14). One of the committees—House Naval Affairs—already has started its sessions. The other—a sub-committee of House Ways & Means, with Rep. Wesley E. Disney of Oklahoma at the helm—will start rolling as soon as Congress frees itself (at least partially) from the inflation mess.

• **For Bigger Navy**—The current Naval Affairs probe is very likely not destined to result in any legislation. The big concern of the committee is to grease the ways for an adequate U.S. Navy, and so its interest in renegotiation is mainly from the viewpoint of whether production is being interfered with.

Manager and counsel of the committee is R. E. Kline who once worked for Under Secretary of the Navy James V. Forrestal. Kline is attempting to keep the investigation on a fair-to-all basis and seems to be succeeding. At least, there have been no under-the-breath squawks from the procurement agencies who normally attribute sinister motives to investigations.

• **Various Possibilities**—Most probable result of the Naval Affairs hearings will be a series of recommendations which individual congressmen, or other committees, can attempt to work into law. Here are some of the possibilities, based on hearings and pressures to date:

(1) Stricter definition of what constitutes an excess profit.

(2) Extension of renegotiation authority to cover agricultural products

NATIVE STEVEDORES

At many of the Army's far-flung bases, friendly natives help the military in noncombat work. They care for wounded, guide forces through jungles, and work as longshoremen. At New Caledonia, natives release troops for military duties by unloading food supplies from American ships.

and contracts handled by the Defense Plant Corp.

(3) Permission to accumulate conversion reserves.

(4) Preferred treatment for certain industries like machine tools.

(5) Exemption of standardized goods from renegotiation on the grounds that items such as pots, pans, and cloth already are controlled well enough by OPA's price ceilings.

(6) Exemption of contractors with less than a $500,000 annual war business. (The current limit is $100,000.)

• **Ways & Means Attitude**—When Disney's Ways & Means subcommittee gets started, however, it will definitely have new legislation in mind. Because Ways & Means is the fountainhead of all tax legislation, any proposed changes will take the form of either (1) substituting increased taxes for the present renegotiation law, and/or (2) revising tax exemptions to allow for conversion reserves. The military procurement agencies would assent to the second but would fight to the last ditch if the Disney group attempts to tear up the renegotiation principle.

In any event, new legislation does not loom as a possibility before next fall at the earliest. Congress is still longing for a recess. But even if perspiring legislators have to forego a vacation, the fight over wages and prices should keep them occupied a considerable time.

• **Distributors up in Arms**—Meanwhile, the antirenegotiation forces are getting some new recruits from among the ranks of suppliers and distributors. These middlemen have suddenly been jolted into the realization that they are subject to renegotiation on their war business because it constitutes a "service" or "subcontract." Hence, profits can be cut back, even if the supplier does not engage in manufacturing.

How many suppliers have been renegotiated, the procurement agencies will not say, although they claim the number is "small." Be that as it may, fear is spreading among the middlemen that they are in for some painful grilling.

Corn Stalemate

Closing of big refinery only reemphasizes depth of crisis; Davis brings various interests together for talks.

Food industry, agricultural, and price experts this week sought desperately for a solution to the perplexing corn problem. War Food Administrator Chester C. Davis called in representatives of leading agricultural colleges, the corn processors, dairy and poultry interests, livestock growers, and feed dealers. Prentiss M. Brown came over from OPA, in the face of what looks like a widening breach between his outfit and Davis'.

• **Mill Closing Forced**—The week's developments proved conclusively that this series of meetings had been called none to soon. Despite the wartime importance of corn products to the food industry, to textiles and paper output, and even to the aluminum foundries and some other metal fabricators, the Pekin (Ill.) plant of the Corn Products Refining Co. was forced to close at midweek.

Corn Products Refining apparently has been convinced for several days that it would have to curtail but hasn't been sure to what extent. Its biggest plant, at Argo, Ill., can mill 95,000 bu. a day but has been running hand to mouth; the smaller plants, that at Pekin (60,000 bu. a day) and at North Kansas City, Mo., (25,000 bu.), have been below capacity for some time. Any shutdown was particularly undesirable because the company felt sure it could never reassemble its labor force.

• **Conflicting Interests**—The Washington conferences on corn were up against a shortage problem of vital importance to four industries: (1) dairying, (2) poultry raising, (3) hog and cattle raising, and (4) corn processing. The fact that the interests of these four are not identical heightened the difficulties encountered.

For example, the War Food Administration and several of the parties involved would have been overjoyed to take the direct approach: Remove ceiling prices so that buyers could bid against the hog market for corn. But there they ran athwart the dairy and poultry men who have to buy feed.

• **Lean Hog Plan Opposed**—The OPA, of course, has been resisting removal of over-all ceilings. Its expert had been toying with a price-break system which would have made it more profitable for hog raisers to sell their porkers at light weights than to feed them up to the point where corn was being converted largely into lard. Now this plan seems to be on the junk pile; pigs are moving to market rapidly enough so that even OPA admits that their appetite for corn isn't the crux of the shortage problem.

Moreover, every competent observer in the Corn Belt knows what the real problem is. Ceiling prices were imposed last January, and movement of corn to market began to slow up at once. Farmers are pretty smart market operators, and the imposition of the ceiling was to them a signal that corn was worth more money.

• **Subsidy by Indirection**—Political out—and Davis' conferees weighed it carefully—would be government purchase of corn at about $1.50 a bushel (approximately what it will bring on the hoof). Corn so bought could then be resold to the trade at prevailing ceilings. But that plan was pure and simple subsidy-and-rollback; what the farmer wants is an out-and-out high price.

To help ease the situation, Commodity Credit Corp. called loans on corn. Last resort was the proposal to requisition corn held in excess of individual farmers' needs; but there aren't enough shotguns to enforce that.

They Can Take It to Truman

Senate committee investigating the war program will be glad to furnish Byrnes with a model for concentrating those congressional inquiries. What it has done, how it works.

An epidemic of congressional investigations is taking up so much of the time of hard-pressed government and business executives that War Mobilization Director James F. Byrnes has asked each house of Congress to set up a single committee for all such jobs. The Senate already has an inquisitional group that could serve as a model. It is the Truman Committee, officially called the **Special Committee Investigating the National Defense Program.**

A New Technique—By now the reputation of this body is such that often a threat to "take everything to the Truman Committee" is sufficient to force a cure of abuses. In some instances, bad spots have been cleaned up before the committee's report on the subject had time to emerge from the government printing office.

Furthermore, the Truman Committee has made a notable contribution to the technique of investigation by its use of a follow-through device. Major "trouble situations" are not washed up and abandoned. Instead, the committee checks back every so often to make sure that former abuses have not returned or that suggested remedies have been adopted. This follow-through is likely to become a permanent addition to the methodology of congressional investigation.

• Senate Was Skeptical—Explanation of the Truman Committee's record lies largely in the talents of its chairman and of the senators making up the group. It all stems from an early conviction of Sen. Harry S. Truman, Missouri Democrat, that the billions which Congress was breathlessly voting for the war effort should be checked on. The suggestion would have received deeper consideration and better appropriations if someone else had proposed it, for in March, 1941, Sen. Truman had a questionable rating both in Washington and in the country as a whole.

Harry Truman became a captain of field artillery in the first World War. On his return, he opened a gents' haberdashery store in Kansas City which flopped. He studied law and was taken up by Tom Pendergast's odoriferous Jackson County Democratic machine. In a few years, the boss made him presiding judge of the county. On his election to the Senate, Truman was stigmatized as "Tom Pendergast's errand boy."

When the storm broke which sent Pendergast to the penitentiary, Truman refused to kick his fallen friend, declared that his patron had never asked him to commit a dishonest act "because he knew I wouldn't do it." As presiding judge, Truman had spent $25,000,000 for Jackson County roads and public buildings. "The only money I ever stole," he once said in Washington, "was $36,000 left over from building the $4,500,000 Jackson County courthouse. Instead of returning the surplus to the treasury, I spent it on a statue of Andrew Jackson."

• Who Got the Job—The Senate's lack of enthusiasm for Truman was reflected in the number of freshman senators dumped into his committee. Vice-President Wallace and the respective party leaders made the assignments. To add some ballast and keep the untried youngsters on the track, the Administration wheelhorse, Tom Connally of Texas, was added.

In addition to these two, Democrats now on the committee are Mead (N. Y.), Wallgren (Wash.), Hatch (N. Mex.), Kilgore (W. Va.). The Republicans—who have occasionally shown a tendency to look for anti-Administration material in the Truman inquiries—are Brewster (Me.), Burton (Ohio), Ball (Minn.), Ferguson (Mich.). Perhaps the very fact that the committee is short on the ham type of veteran statesman (who uses every trick of self-glamorization) provides an explanation of how the body has functioned without internal friction. It has never issued a minority report, something unique in the annals of long-standing committees handling controversial war matters. Another reason back of its cohesion and drive is its chief counsel, Hugh Fulton.

• Prosecutor With a Record.—Truman realized that his program would require a prosecutor with a high degree of extractive skill but with depth and balance. He consulted Attorney General Robert H. Jackson (now on the Supreme Court). Jackson strongly recommended Fulton, then an assistant U. S. attorney in New York. Fulton was Ohio-born, a graduate of Michigan, had been with the lofty New York commercial law firm of Cravath, de Gersdorff, Swaine & Wood before entering government service.

High-spot in Fulton's record was the prosecution and conviction of Howard Hopson of Associated Gas & Electric. He had also prosecuted and convicted Stephen Paine of the Boston brokerage house of Paine, Webber & Co. on a fraud charge (and was afterward thanked by his victim for a fair trial). Fulton handled the conspiracy indictment against J. Warren Davis, Philadelphia federal judge accused by William Fox, the one-time movie potentate. He left this case to take the Truman job. (Thereafter Davis was acquitted though Fox went to jail making loud and appropriate squawks.) On the Truman Committee, Fulton gets $9,000 a year—the limit that can be paid without special congressional action. Whether he is making undue use of the committee assignment to build himself up

The Truman Committee is made up of six Democrats and four Republicans, but all of them serve on other committees as well, and the photographers don't catch them all together. At the group's organization meeting, Mar. 12, 1941, they found Chairman Harry S. Truman (seated) and from the left (standing), Senators Ball, Wallgren, Connally, Mead, Brewster.

Truman Committee hearings always make news, usually draw crowds—particularly when they deal with Washington's interdepartmental rows. When Under Secretary of War Robert Patterson came to this hearing to charge that priorities for synthetic rubber were impeding the production of high-octane gasoline, the committee hung out the S.R.O. sign early.

is an unsettled argument in the Senate press gallery—which, nevertheless, agrees that he is doing a good job.

Fulton is 35, has a round and friendly face that furnishes a perfect blind for enmeshing the unwary witness. He and Truman hit it off at once. They have since perfected their organization and technique. The staff consists of 17 investigators and 12 stenographers. This force occupies four offices in the Senate office building.

• **How the Committee Works**—The committee's day starts with a conference in the "dog house," a small office off Truman's main sanctum, furnished with comfortable leather chairs. Here members and their counsel talk over the conduct of current cases and the possible inclusion of new ones.

Sometimes the committee develops an inquiry on its own initiative, but most of the time it acts on tips. These come from various sources. Now that the fame of the committee is nation-wide, it gets 200 to 300 tips a week. Most of them come by mail though some come from personal visits and mysterious phone calls. In many cases, workers in war plants report on practices injurious to the war effort.

It was a worker at Carnegie-Illinois Steel who started the investigation which resulted in indictments on charges of falsifying tests on plates and of destroying records. Information from an employee of Wright Aeronautical Corp. led to charges by the Truman Committee that plane engines supplied by the company to the Army and Navy contained defective parts. Both companies have attributed their troubles to pressure for greater war output, leading to the passing of doubtful material by employees, and have applied correctives. Business concerns generally are inclined to think that the Truman Committee sometimes fails to give due weight to reasonable explanations of how things can go wrong under the terrific pressures of the war program.

• **Following Up Tips**—Sometimes investigation of an inside tip on one project will uncover a trail leading to subsidiary shenanigans. Thus in the scandalous Winfield Park (N. J.) housing project the committee uncovered evidence that led to the indictment of C. F. MacEvoy and dug up interlocking corporation connections which produced some very puzzling details as to the cost of concrete barges under construction by MacEvoy.

The committee has no power except to advise and recommend. Its job is to correct abuses that are holding up the war effort, not to put people in jail. But if criminal practices are uncovered, the evidence is turned over to the U. S. attorney general for proper court action. Though its powers as defined by enabling legislation give it authority to inquire into any phase of war conduct, the committee has, so far, avoided examination of strategic matters, holding that this is the responsibility of the military.

• **Set Off a Depth Charge**—However, this doesn't mean that the committee pulls its punches when it finds the combatant services at fault. Perhaps the biggest explosion the group has yet set off was an examination that took in the submarine menace. The committee disclosed that during 1942 the U-boats sank 12,000,000 tons of ships or 1,000,000 more tons than Allied yards h constructed.

The public was doubly shocked this revelation since Navy policy on t subject was strictly hush-hush, and releases were larded with assuring pro ises for the future. Secretary of Navy Frank Knox promptly denied committee figures, sought to brush t crisis aside by opining that the senat had confused gross tons and deadweig tons. But the senators snapped ri back. One of the committee membe visited Knox, observed blandly th since the secretary had publicly opene an argument as to whether he or t Truman Committee was right, it wou be necessary to call him before an ope hearing of the committee and end t confusion. Knox promptly reversed h engines, admitted that the committ figures were accurate.

• **The Charge Kicked Back**—With t Atlantic battle now going against t U-boat, committee members can gr at the lighter side of this investigation The findings criticized the Admir Blimps, the old broad-bottomed, battl ship set, which had stuck to conve tional defenses against submarines an refused to give younger officers wit new ideas sufficient chance. Result wa a flood of suggestions in the committe mail with original schemes for winnin the war at once. Many of the crackpot turned to the committee because the had been brushed off by other goven ment agencies.

The prize went to an unname patriot who had perfected a "free fuel" airplane engine about which he wa pretty fuzzy except to reveal that it i run on air. He proposed building on plane of this type for every man in th Army. After teaching all the soldier aviation, each plane was to be loaded with three yards of good old U. S. A earth. The Army would then take of from the West Coast, fly to Toki where the 7,000,000 planes would dump their soil, thereby burying the Japanese capital and thus bringing the war to an expeditious end.

• **How Hearings Are Run**—The committee's investigations are parceled out to staff members who have specialized in the subject under study. Many an abuse is cleared up without resort to open hearings. But when hearings are necessary, the Truman group tries whenever possible to save government money and time by holding the sessions near the area affected rather than paying to bring numerous witnesses into overcrowded Washington. It also breaks up into subcommittees to speed and widen its operations.

Procedure at a hearing is for the committee to sit on one side of a long table with witnesses on the other. Often executives concerned will ask to be permitted to testify, trusting the fairness

of the tribunal to get their views on record. Usually witnesses are backed by a formidable array of legal counsel loaded with documents. Proceedings begin with witnesses reading a prepared statement of their position. Questions follow, with Fulton pursuing his prepared strategy and the senators taking over when they want a particular point clarified.

• **Reports Go to the Point**—Reports of the committee are full of tight English and sound sense. Fulton denies that he deserves all the credit for the reports, says that Chairman Truman and the entire committee go over them, making corrections, abbreviations, and amplifications.

In an investigation of labor conditions, the committee had a stormy session with John L. Lewis in which one senator went so far as to call the roaring John L. a "mountebank." Yet the resulting report is a model of understatement. In referring to Lewis' contention that he did not consider his no-strike promise to the President as binding, the committee had the following comment to make:

"The obligation which rests upon Lewis is not an obligation arising by contract with the President. It is an obligation to the United States arising out of the war emergency. It is based upon his duty as a citizen to a country which has enabled him to exchange the sweat and physical toil of a miner for the comforts and privileges of a labor executive."

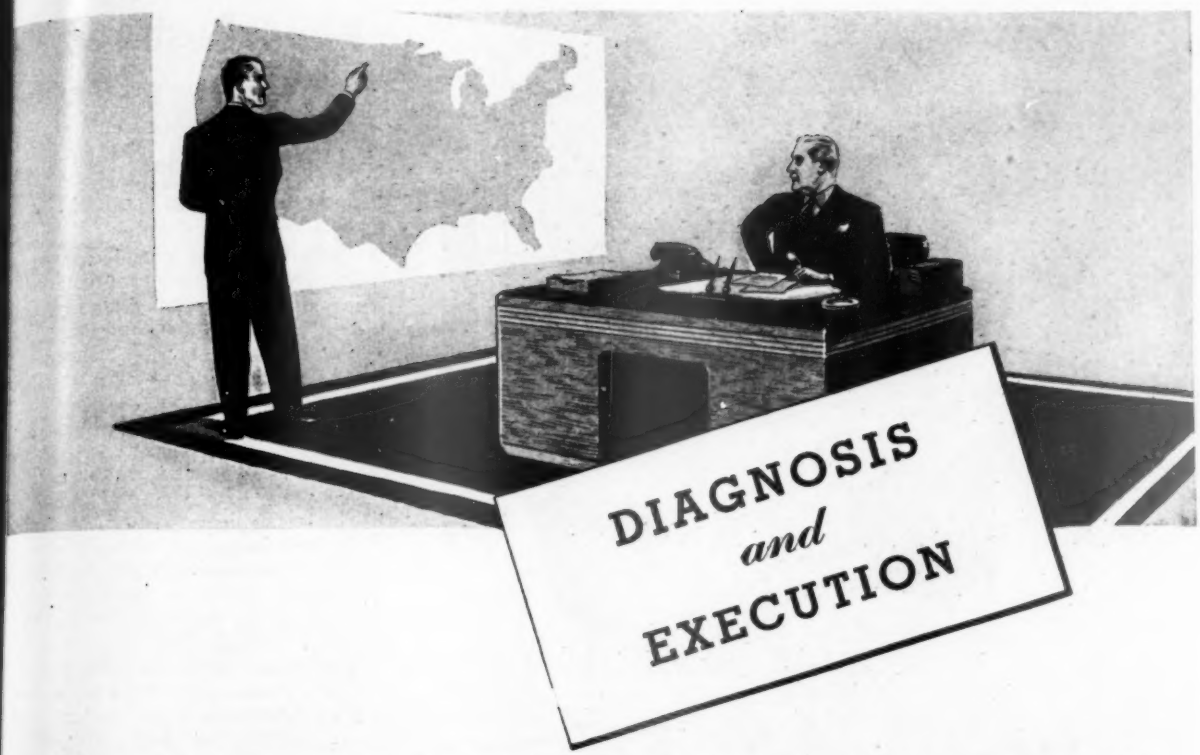
• **And More Coming**—To date, the committee has issued 21 reports. In addition to those already mentioned, the subjects include aluminum, priorities and utilization of existing manufacturing facilities, light metals and aircraft, conversion, manpower, shipbuilding, gasoline rationing and fuel oil, lumber, barges, farm machinery, steel, and renegotiation of contracts—not to mention a slight political whitewashing job on "the investigation in connection with Sen. Albert B. Chandler's swimming pool in Kentucky."

Meanwhile, fresh territory is being covered. Either under scrutiny or on the schedule are new phases of aircraft production, food, housing, magnesium, operation of government ordnance plants, and other matters warming up on the back burners.

• **Cost Record**—Most curious to Washington veterans, the job is being done at a low cost to the taxpayer. On an original appropriation of $15,000, the Truman Committeee performed an operation on the construction of Army camps which Lt. Gen. Brehon B. Somervell said saved the nation $250,000,000. Total appropriations (since Mar. 1, 1941) are $300,000 of which only about $150,000 has been spent. Washington comments wonderingly that these committee members have not even angled their cases so as to provide themselves junkets at public expense.

STICKERS ON CABS

With daily mileage limited by the Office of Defense Transportation, many taxicab drivers are refusing long-haul passengers because short runs are more profitable. Chicago cab companies are squelching the practice which violates a city ordinance against discrimination. On each cab they display a sticker that cites the law and explains to patrons that the machine has enough gas and miles to make any reasonable trip. Whatever excessive mileage that is traveled one day is adjusted the next.



The physician's accurate diagnosis is "half the cure." The general's well-conceived plan is "half the battle." *But only half!*

And when it comes to insuring your business interests, you likewise need both sound diagnosis and painstaking execution.

The adequate insurance of your business cannot be effected, simply by applying for various forms of standardized policies. It calls—first—for a study and review *by specialists* of many facts the non-specialist would never think of, and the formulation of a complete insurance plan. It calls—next—for competent execution of this plan, from the drafting of contracts that fit your requirements to the negotiation of such contracts with the insurance companies. Complete execution includes determination of the amount of your claims and their collection, if loss occurs.

You always gain by having an organization of competent brokers handle your business insurance. They are independent, represent no insurance company. They are at all times *your buyers, your representatives.* Their compensation is not an extra fee from you, but a brokerage paid by the insurance companies.

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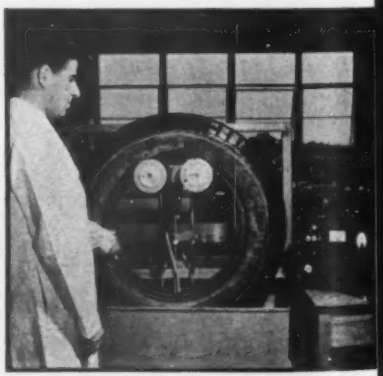
New Pastures

Goodyear's researches, in electronics, aviation, plastics illustrate alertness of rubber firms to postwar trends.

While oil and chemical companies have been developing synthetic rubber ingredients, the rubber companies likewise have been branching out. Goodyear Tire & Rubber Co. pointed up its activities in electronics, aviation, and plastics in dedicating a new research laboratory in Akron this week.

• **Broad Range**—Demonstrations included a radio static neutralizer, a gadget about the size of a radio tube which may have postwar implications for both home and commercial sets; a supersonic tire inspector, which the company hopes to make at a price around $100, that should appeal to tire service stations; Chrysler Motor Co.'s Cycleweld (BW—Jun.12'43,p79); an elastic plastic called Plioflex; and plastic foam, an extremely lightweight insulating material that looks like solidified soap suds.

The static neutralizer utilizes an electronic tube which isolates static from radio waves and uses the static charge to generate an opposite or neutralizing charge. Goodyear's Research Director, Dr. L. B. Sebrell, said that the Army hadn't completed all its tests on this device but had found it a superior instrument. The inventor is a shy, 36-year-old, self-educated physicist, Gilbert J. C. Andresen, who got acquainted with Dr. Sebrell two years ago by installing a radiotelephone on Sebrell's yacht. Andresen had his own radio research laboratory at Port Clinton, Ohio, and the two found common interests. Andresen convinced Dr. Sebrell that



Among devices developed in Goodyear's new research laboratory is a tire tester which spots defective used tires by high-frequency sound waves. A green light is the go-ahead for retreading; red, for the scrap pile.

THE KID AND HIS LETTER

It is late afternoon in a camp behind the front.
Men back from weeks of fighting in the foxholes are resting.
Suddenly a shout rings through the camp. The mail has come! Men crowd around a battered jeep . . . and cheer. Hands reach up and grab.
The mail has come!
Look. There's the kid you know, smiling from ear to ear.

☆ ☆ ☆

Now his eyes race down a tiny piece of paper . . . reading fast, then once again . . . and slowly.
Dad mowed the lawn today and fixed the screens. Pete Jones dropped in. You ought to see our Victory garden after last night's rain.
We cut Joan's pigtails off. She got through grammar school this week, you know. We see Dottie almost every night and she looks fine.
It's wonderful to get your letters. I guess you know how much we miss you. Every time I pass your room, I think of you—and pray that God will keep you safe. Barnacle Bill wags best regards. Love, Mother.

☆ ☆ ☆

Deep down inside he's warm and glowing now.
Because a loved one half a world away wrote the cheerful things that happened one day here at home.
And all along the line, men thought and worked and cared enough to speed that letter on its way.

☆ ☆ ☆

When your train is late, think of the Kid and his letter.
You may stop on a siding—so fresh troops can go to help him.
You may wait in a station—so there will be field guns over there to cover his advance.
You may even get home hours late—so he'll have tanks, bullets . . . yes, and letters.
For every needed sacrifice we make, helps to speed that day when he'll come home.

THE NEW HA

Serving New York, and the Great Industrial States of Massachusetts, Rhode Island and Connecticut, in War and Peace.

For FREE Reproductions of this advertisement address: Manager of Public Relations, The New Haven Railroad, Grand Central Terminal, N. Y.

he had a workable static eliminator, and they got together on a contract.

• **Additional Improvements**—Andresen's original antistatic device, which used electric charges from aircraft engine exhaust, ran into trouble with high-powered engines, but an alternate method was discovered last October and kept secret until now. Andresen claims the static neutralizer he demonstrated will cut static, regardless of its source or intensity, down to "a maximum ratio of equality with the radio signal being received"; further, that improvements not included on the demonstration set eliminate all ordinary static and will bring direction-finder and aircraft radio beams to pilots regardless of storms or other interference.

Goodyear's tire inspector would compete with devices such as X-ray and other testing equipment designed to spot hidden flaws in tire fabric. It adapts well-known principles of electronic sound detection with a listening device operating under water that is sensitive to tire fabric air pockets. Pilot model will be sent to Lloyd Felker, Marshfield (Wis.) dealer, who urged Goodyear to develop a machine that would tell whether a casing was worth recapping.

• **Twice as Rigid**—Cycleweld was first demonstrated last fall to a carefully restricted industry audience in Detroit by S. G. Saunders, head of Chrysler's production research department, who had developed the invention in collaboration with the Army and Navy. Basis of the process is an organic synthetic cement, which, under heat and pressure, forms a strong weld-like bond. Cycleweld construction, Chrysler claims, is both lighter and stronger than riveted, bolted, or welded seams. A metal sub-assembly put together with Cycleweld in an early demonstration was twice as rigid as its riveted counterpart, had greater resistance to shear and impact tests, and greater creep strength. In place of 5,500 rivets, the Cycleweld job had 30.

Goodyear fabricates the cement into a black, paper-like sheet with satin finish, which is easily handled in production work. So far, Cycleweld has not been adapted to repair jobs. Its resistance to cleavage impact is said to be inferior to riveted or bolted construction, and it works best on the lightest aluminum sheet. Adaptations in wood to metal and plastic to metal joints are said to be satisfactory, although the bonding temperature is about 300 F. Before Cycleweld is completely successful, Chrysler men say, construction design will have to be adapted to it. They hint that this already is under way.

• **Ersatz Leather?**—Plioflex is a plastic with some of the characteristics of the vinyls plus the ability to be vulcanized like rubber. It is leathery and elastic. Proposed applications are as a substitute for leather in shoe soles (Goodyear says it wears longer than leather soles) and in such commercial uses as automobile

PLASTICS AWARD TO SHAW

The annual John Wesley Hyatt award for outstanding achievement in the plastics industry during 1942 goes to Frank H. Shaw, president of Shaw Insulator Co., who pioneered the transfer molding of thermosetting plastics into intricate parts for war matériel. The award, established by Hercules Powder Co., is a memorial to Hyatt, the inventor of Celluloid and the Hyatt flexible roller bearing. Seen at last Thursday's award dinner at New York's Waldorf-Astoria are (left to right) Dr. Per K. Frolich, president of the American Chemical Society; Shaw; Richard F. Bach of the Metropolitan Museum of Art; and Harvey Wiley Corbett, architect.

Bill owes his life to *COLD MAGIC*

DEATH got a cold shoulder the day Bill stopped that bullet. All because, back in the States, a new kind of magic had been contrived at a laboratory.

There, row on row of glass cylinders filled with plasma pooled from the blood of volunteer donors were rotated through a bath of *dry ice*. At a temperature of 74° below zero, the life-giving fluid formed a "shell" from which excess vapor was easily removed. Thanks to rapid freezing, too, the finished dried substance retained its *original* curative values. Brought the benefits of fresh blood to Bill . . . months later, thousands of miles away!

At Wyandotte, Michigan, the world's largest dry-ice plant is producing vast quantities for plasma processing and many other war purposes. Wyandotte dry ice cools rivets, keeps aluminum workable without repeated heat treatments. It shrink-fits metal parts for machines, assists in the calibration of aviation instruments by creating stratosphere temperatures.

We're pleased, of course, that another of our many products is doing a man-sized job for industry. But most of all, we like to think about that soldier . . . heading toward recovery . . . with the help of dry ice.

• Wyandotte Chemicals Corporation consolidates the resources and facilities of Michigan Alkali Company and The J. B. Ford Company to better serve the nation's war and post-war needs.

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window strips, where it is held superior to rubber.

Plastic foam is stirred up and solidified from a synthetic resin base. It weighs about 0.65 lb. per cubic foot—one-ninth the weight of cork—and scored 93 in an Army test in which previously used insulating materials rated only 48 to 50. Postwar refrigerators, Good-year predicted, are going to be very, very light.

Break for Farmers

Allotted tonnage of steel should permit farm machinery manufacturers to turn out 70% of their 1940 output.

Major full-line farm machinery makers figure tentatively that they will be able to manufacture around 70% of their 1940 output from their share of the 900,000 tons of steel that WPB allocated their industry last week (BW —Jun.19'43,p7). If the allocation fails to produce the steel on time or at all, or if other critical components fail to materialize, then trouble could develop.

• **Includes Repair Parts**—In some reasonably good years, such as 1935 and 1936, the industry probably consumed approximately this tonnage of materials and satisfied the needs of the farmers of that day. In 1940, the industry used around 1,200,000 tons of steel. Principal difference between end results for farmers in those years and now is that far less of the material then had to go into repair parts, on which the new order places no quota limitations.

The Dept. of Agriculture figured some time ago that U. S. farmers needed considerably more than 70% of 1940 machinery production. The industry is sure that if practically all of the 900,000 tons actually goes into farm equipment for domestic use and if this is distributed on time in areas where it is most needed, the farmers can get by. Already two months of the production season have passed awaiting the order.

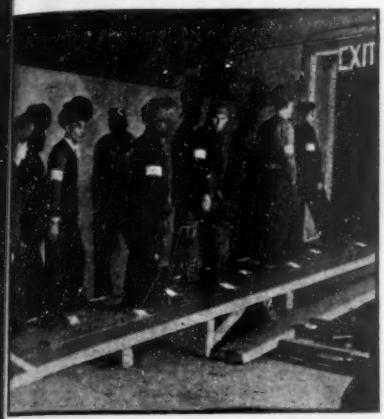
• **Exports in Same Quota**—Any farm equipment for export has to come out of this same tonnage; hence, if lend-lease should put on a surge, this would curtail domestic consumption accordingly. Nobody pretends that 70% of all the equipment that today's prosperous labor-pinched farmers would like to buy, or even that they could usefully employ to attain their crop goals.

If output were unlimited, the coming year would produce the biggest volume the industry has ever seen. How the new production will be distributed is left in the air, "subject to such directives as may be issued." The industry's bets are that 1944 implements will be shipped by manufacturers as they see

fit, through their regular distribution channels, and will be rationed, at the retail level only, by local boards.

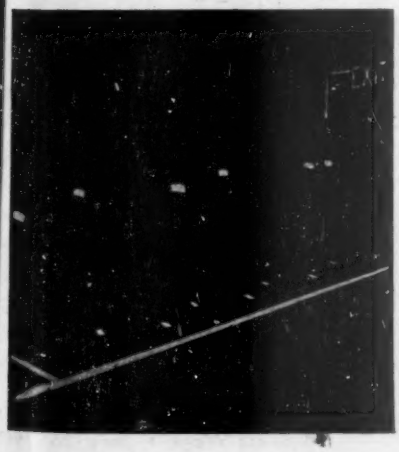
Assumes Industry View—Most definite indication that the past year's experience with county-by-county rationing was too much for the Dept. of Agriculture comes from an order which it recently circulated in Kansas. This takes over almost verbatim the industry's views of what ailed last year's L-170 order and implies broadly that county-by-county procedure was probably all wrong.

Also last year's attempt at concentration of production in small factories is out the window. Sole vestige of that philosophy is the provision that a company doing an annual volume of $100,000 or less can manufacture in the coming year 100% of its tonnage.



GHOSTS THAT WALK

Simple luminous markers may be the answer to management prayers for worker protection during blackouts or power failures. They gave adequate results in a recent test at the Pennsylvania Range Boiler plant, Philadelphia. As the lights went out, a column of workers (above) suddenly dissolved into a line of glowing arm bands (below), marching up a ramp to an exit plainly marked despite the blackout.



Tempest in Ships

Owners of seized vessels rebel against basis of charter rates paid by government; they suspect enemy aliens get more.

A three-cornered row among shipowners, the War Shipping Administration, and the Comptroller General continues to hold up about $200,000,000 compensation due for American-owned vessels taken over by the government for war operation. Hearings on a bill (H.R.2731) designed to settle the rumpus have merely aggravated the dispute.

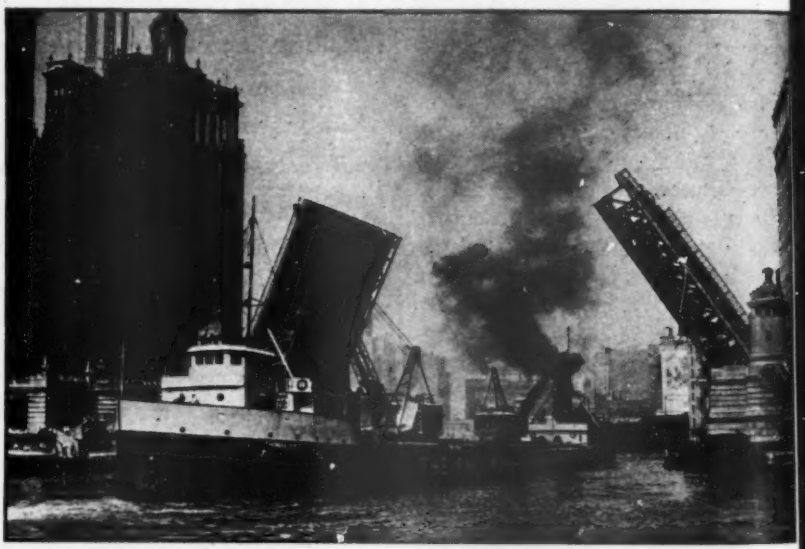
Involved are some 4,000 requisitioned craft, ranging through the whole catalog of liners, freighters, tankers, yachts, fishing boats, tugs, and barges. The holdup of this fund has seriously dislocated the financial condition of some ship companies, forcing them to borrow to continue operations in behalf of the government.

● **Values in Dispute**—The argument involves the basis on which the ships are valued. Crux of it all is the enhancement clause of the Merchant Marine Act of 1936. It states that "in no case shall the value of the property taken or used be deemed enhanced by the cause necessitating the taking or use." This clause was cited by the Comptroller General to justify his contention that the WSA rates of compensation were too high. Owners of ships built with the aid of government subsidy are not involved in the mixup since they are paid on the basis of what they invested.

The WSA began assembling privately owned vessels late in 1941, and by the end of April, 1942, practically all the merchant fleet had been requisitioned. Most of the big ships were put under charters by which the owners continued to operate them. The WSA was authorized to determine charter rates and compensation to be paid in case of loss.

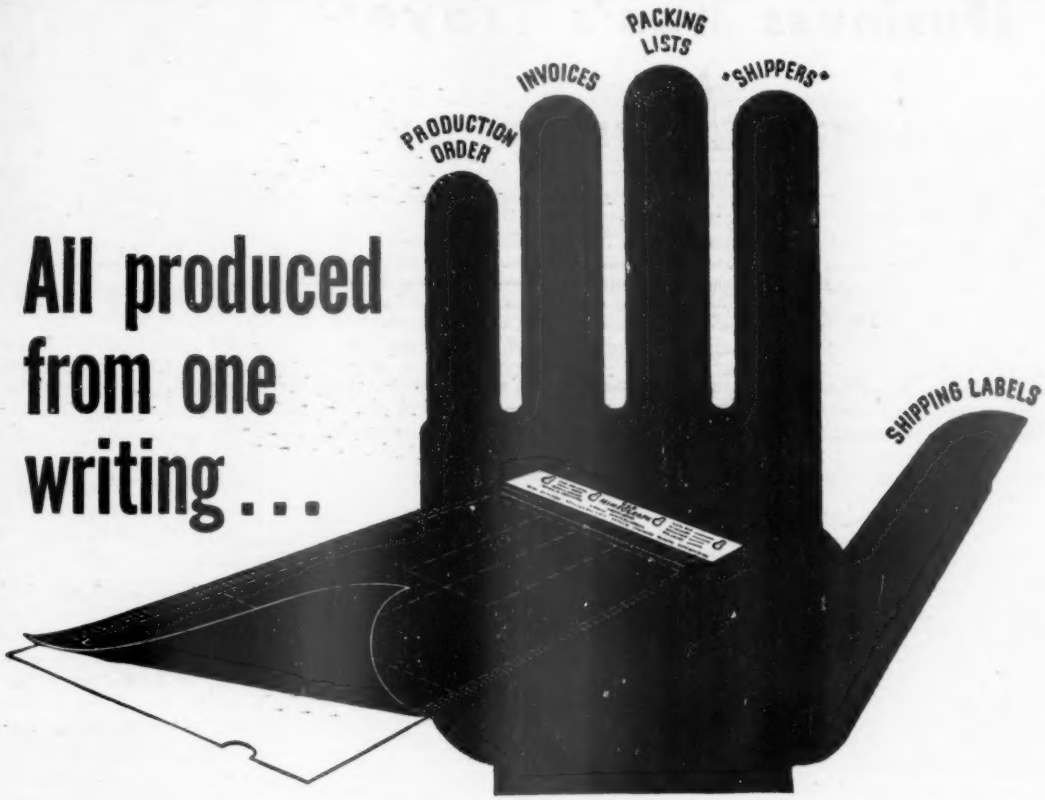
● **Wartime Enhancement Outlawed**—After payments under the charters had continued for months, the WSA asked the Comptroller General for a ruling on its determination of rates and valuations. On Nov. 28, 1942, Comptroller General Lindsay C. Warren announced the decision which started all the trouble. He found that the enhancement provision of the Merchant Marine Act "prohibits the payment of compensation for such vessels to the extent that it may be based upon values in excess of the values existing on Sept. 8, 1939."

WSA disagreed with this interpretation, but the comptroller is top man since he must O.K. the checks. Following his ruling, the WSA announced that thereafter it would withhold (1) all payments for total losses of ships, (2) 25% of compensation for time charters (under which owners operate their ships), (3) 50% for bare-boat



BRITT'S BAD LUCK

For Columbia Transportation's crane-equipped freighter, Thomas Britt, a cargo of sulphur recently proved unlucky at Chicago (BW—Jun.19'43, p19.) Finding the load had been delayed by inland floods, the boat made two other trips, then returned for its sulphur. Outbound for Buffalo, the Britt had more bad luck. It went aground on a Chicago River mud bar—keeping the Michigan Ave. drawbridge open four hours during a morning's traffic peak. Two reasons for the accident: The Britt was drawing 21 ft.; the river level had been lowered a foot for passage of naval craft.



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charters (under which the governme operates requisitioned ship). The de lock continues with the amount d shipowners increasing at the rate about $12,000,000 a month for chart hire, plus amounts due for vessels sun

• **Reluctant to Sue**—The owners cou accept a part of the money, but in th case, they would have to sue for th rest. They also could sue for the enti amount—and the attorney for t American Merchant Marine Institu has charged that the WSA is trying force shipowners into litigation. Shi ping interests object to going into cou because it would be bad public relatio during war, also because it would tak two years or more to get their mone

The owners are united in opposin the bill, which ostensibly was propose to relieve them. It is claimed that th bill would only allow them about 35% more than the 1939 valuation and tha this is not "just compensation." The stand pat on their demand for valuatio as of the date when the ships wer taken over. Other objections are tha there is no guarantee that the Comptro ler General would accept the 35% o fered since he bases his decision on th language of the Merchant Marine Ac that if legislative relief is afforded would be better to amend the Mer chant Marine Act, and lastly that th WSA already has sufficient authority t enforce its valuations.

• **Foreign Owners Paid More?**—There have been reports that in the case o ships taken over from the German Italians, French, and other foreign own ers, payments have been higher than for American ships. Secretary of State Cordell Hull has declared that such ships must be paid for on a basis o value at the time they were seized. The enhancement clause in the Merchant Marine Act applies only to U. S. ton nage. Payments for foreign ships are being held in escrow and the amounts have not been made public.

Patent Reform

But citizens' commission keeps away from extremes to which TNEC went or to which Senate bills are pointed.

No substantial revision of the patent system is proposed in the long-awaited report of the National Patent Planning Commission, now in the President's hands.

Most attention will probably be attracted by the recommendation that the life of a patent be limited to 20 years from date of application, instead of 17 years from the date of grant as at present. This would end any opportunity to extend the life of a patent by keep-

Imagine!...using friction to bond plywood, to produce molded plastics or to dry tobacco! Friction...the destroyer of efficiency, the arch enemy of the machine age...is at last being put to useful work. The idea is not new, for primitive man made good use of friction when he kindled a fire by rubbing two sticks together. Today, through the use of ultra high frequency current, friction is being applied to the molecular structure of various materials to generate heat internally.

The practical applications and the advantages of such a method for heating materials during manufacturing processes become readily apparent: uniform heating, less handling, speedier production, reduced labor and more perfect control of temperatures.

High frequency, or Electrostatic Internal Heating Equipment utilizes an electronic circuit similar to that found in most any radio transmitter. Thus the electronic vacuum tube which is the very heart of such equipment, becomes of increasing importance to every manufacturer using heat in the processing of his products. ☆ Eimac tubes give you the utmost in stamina, dependability and performance capabilities. They are consistently ahead of the field...first in the most important new developments in electronics...the number one choice of the world's leading electronic engineers. Look for Eimac tubes in the electrostatic heating equipment you are considering...try Eimac in your present equipment.

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ing the application pending for an inordinate time.

• **For Recording Agreements**—The commission also urged the recording of all patent agreements so as to bring to light restrictive arrangements and to reveal understandings of any kind with foreigners. It called for the throwing open for manufacture of any invention needed for national defense or for public health or safety. It also asked that Congress declare a national standard for the determination of patentability to be used uniformly by the Patent Office and the courts.

• **No Compulsory Licensing**—Compulsory licensing, major proposal of the radical reform groups, was not approved. However, the commission recommended that whenever the courts find that an infringement suit involves an invention necessary for national defense or for public health or safety, they shall limit the patent owners to reasonable compensation for use of the invention without the right to prohibit its use. The report also proposed a single court of patent appeals.

• **TNEC Aftermath**—The commission consisted of Charles F. Kettering of General Motors representing science; Chester Davis, War Food Administrator, for agriculture; Owen D. Young of General Electric, for industry; Edward F. McGrady of RCA Manufacturing Co., for labor; and Francis P. Gaines of Washington and Lee University, for consumers. Conway Coe, who has been a member of the patent bar, was its executive secretary. It was appointed by President Roosevelt in December, 1941, after the stir created by the Temporary National Economic Committee's investigations into alleged monopolistic combinations built upon close-held patents and licenses.

Generally speaking, the present report embodies the proposals made at that time by the defenders of the present patent system. Much more radical changes are urged by a senatorial committee headed by Sen. Homer T. Bone, which picked up the ball dropped by TNEC. After hearings which ran over a period of five months and 5,200 pages, Bone's committee lapsed when its funds ran out. The senator is noncommittal regarding the commission's proposals but plans to pick the fight up after a spell in the hospital.

• **Pepper Is Critical**—In the meantime, Sen. Claude Pepper has ready a bill with a 22-page preamble criticising the commission's report. The commission says the War and Navy departments know of no serious interference to the war effort caused by the patent system. If so, say the critics, this is because manufacturers without access to the technology covered by cartel agreements simply don't bid on military contracts—hence are legally unknown to the War and Navy planners

FIBER LICENSE PLATE

About a dozen states saved considerable steel this year by issuing small metal strips for attachment to 1942 license plates—instead of complete new tags. However, in Atlanta, Roy Lewis (above), president of the Universal Tag Co., is advocating no steel at all. He is marketing a new waterproof fiberboard tag needing no critical materials. Lewis reports several states have the proposed 5½x11¾-in. tag under consideration.

Postal Problem

With mails glutted, there has been talk of stores dodging ban on deliveries by using parcel post, but that's out.

Use of the parcel post system to get around the severe restrictions on local deliveries which the Office of Defense Transportation put into effect June 15 to conserve gas and rubber won't work. The Post Office Dept. cooperates with other agencies and is an old hand at meeting situations where it might get into hot water.

The teamsters' strike in San Francisco a couple of years ago, for instance, temporarily put three times as many tons of packages into the mails, but the local postoffice choked off the traffic by judicious application of a policy of "We'll do what we can with the equipment we've got."

• **How to Control It**—If department stores and other merchants should decide to use the mails for customers' purchases, and the volume becomes so large that a postmaster sees he will have to add trucks or carriers, the local postmaster will call in the traffic managers of the merchants and tell them to cut down on packages—and they will.

Backing up this sort of agreement stands Section 571 of the Postal Laws

There's More Than One Way To Win A War

You can go the limit and join the Army, the Marines, the Navy or the Coast Guard—

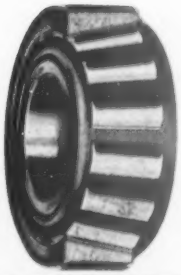
Or you can go into the Merchant Marine on a cargo ship—

Or you can enlist in the WAACS, the WAVES or the SPARS—

Or you can exchange your old way of living for war work, like Mrs. Edith Ledger who has become an expert welder in one of the large plants making Timken Bearings for all kinds of fighting equipment—

Or—if you can't do any of those things—you can at least buy bonds, save scrap and waste materials, donate blood, and economize on all materials and services that are needed for the Armed Forces.

THE TIMKEN ROLLER BEARING COMPANY • CANTON, OHIO



TIMKEN

TAPERED ROLLER BEARINGS

Timken Bearings by the Millions are used in tanks, planes, trucks, guns and ships

How to Start a Revolution

YOU wouldn't take them for revolutionists, these men. They don't wear long black cloaks or employ secret passwords. But they're preparing to toss a bomb into American industry . . . to start the biggest revolution since 1776.

☆

WHO are these men? They're research specialists of the aviation industry. You see, it takes more than aeronautical engineers to build today's bombers. Here at Martin's, for example, are experts in metallurgy, plastics, synthetic rubber, hydraulics, electronics, and many other fields, united in one common cause . . . to make America supreme in the skies.

From the efforts of these Martin research men have come more than great aircraft. They have developed new materials, devised new uses for old materials, discovered new manufacturing methods which promise to revolutionize American life.

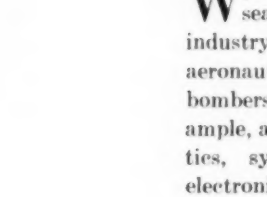
The works of their research are now blazing America's way to victory around the world. You'll see the mark of these men after victory, not only in aircraft but on the homes in which you live, the cars you drive, the very clothes you wear. Tomorrow in a test-tube!

What's more, America's postwar products and American technical skill are going to reach world-wide markets *fast*. Already Martin has completed designs for giant airliners of 125 or more tons, ready to build as soon as victory gives the green light. Such ships will make neighbors of all nations . . . such ships will give seven-league boots to the peoples of all nations . . . such ships will bring the world to within hours of your doorstep.

America and the world have a glorious future ahead, when victory is won. That's why we say, buy Bonds today . . . because you've a date with a new world after victory!

THE GLENN L. MARTIN COMPANY,
BALTIMORE, MARYLAND, U. S. A.

Member: AIRCRAFT WAR PRODUCTION COUNCIL, EAST COAST, INC.



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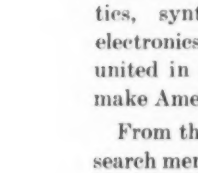
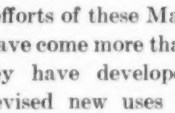
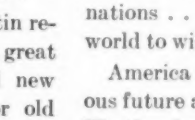


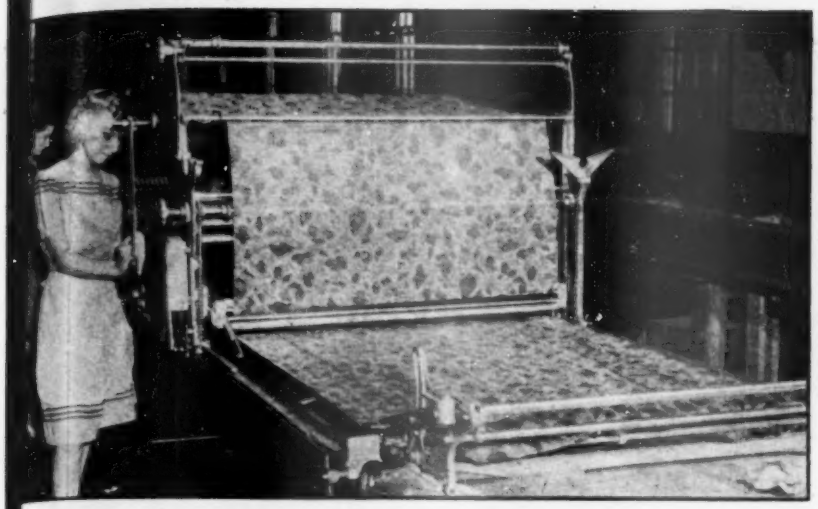
NAVY'S PATROL BOMBER



BRITAIN'S BALTIMORE



ARMY'S MARAUDER



LIFESAVERS FOR AIRMEN

One glimpse inside a parachute factory will explain to any woman why her nylon stockings are gone. At Lowell, Mass., Atlantic Parachute measures its nylon consumption by the mile in producing hundreds of chutes daily. In one operation, a spreading machine (above) places 476 layers of nylon cloth on a 177-ft. cutting bench. From there, sections go to be sewn with nylon thread and fitted with nylon shroud lines.

and Regulations which gives the Postmaster General authority to change classifications, weight limits, rates, or zones of fourth-class mail "in order to promote the service to the public or to insure the receipt of revenue from such service adequate to pay the cost thereof."

• **No Recent Statistics**—No statistics are yet available on local mail deliveries of parcels of local origin since the initial restrictions were imposed on store deliveries May 15, 1942, by the ODT. Local parcel post volume had been going up in the previous four years, but the ratio of local volume to deliveries of nonlocal parcels had remained about the same.

In the fiscal year ended June 30, 1942, local parcels totaled 92,910,000 lb. as compared to 90,555,000 lb. the preceding fiscal year, 79,180,000 lb. in fiscal 1940, and 76,462,000 lb. in fiscal 1939. Nonlocal parcel deliveries for the same years were 3,752,000,000 lb., 3,396,000,000 lb., 3,398,000,000 lb., and 3,273,000,000 lb.

• **Big Volume**—The parcel post problem is complicated by the fact that the Post Office Dept. expects to handle 32,000,000,000 pieces of mail this year, 4,000,000,000 more than the average of prewar years. Main causes of the increase are the 4,500,000,000 items passing between soldiers and their homes and the unguessable but large number of letters and parcels sent home by folks who have migrated to war jobs. Together these two groups more than make up the annual increase.

Revenues of the department are climbing and will probably touch $960,000,000 when figures are in for the fiscal year ending June 30. The previous year's revenue was $860,000,000, compared to $813,000,000 in 1941, and $767,000,000 in 1940.

• **Unrealized Expectations**—When the war began, many postmasters foresaw a decline in business because there was less factory-to-civilian selling and fewer goods to write letters about or ship by parcel post. Some expected this drop might amount to $30,000,000 and that it might speed up the decline in the number of postoffices which set in when automobiles became common. None of this has happened.

ZONING CHANGE SOUGHT

Chicago mail-order firms have petitioned for a change in the new postal zoning regulations (BW—May22'43,p 34) which, they claim, would save money for them and other companies with large mailing lists. As the order stands, addresses must look like this:

Business Week
330 West 42nd St.
New York 18, N. Y.

The petitioners maintain that there is not room between the city and state names on their present stencils to insert the zone number; that they would have to remake their entire stencil files. They want to be permitted to put the zone number directly after the street address, thus:

Business Week
330 West 42nd St., 18
New York, N. Y.

When members of the Dairymen's League Cooperative, serving the New York metropolitan district, met in annual convention, their major concern was getting corn for their flocks. This week, Gov. Thomas Dewey spread the problem before the governors' conclave in Columbus, Ohio.

Farmers in Clover

Crops, livestock promise to yield record gross income of $22,000,000,000; hogs will be largest single source.

Farmers are doing all right financially in this second year of war. They'll gross better than $22,000,000,000 in calendar 1943, divisible among the smallest farm population in more than three decades (less than 28,000,000 men, women, and children by government estimate), and will pay out less than half of this in operating costs.

• **Favorable Factors**—Farm debt is shrinking, farm values are rising, and the ratio of mortgage debt ($6,500,000,000) to value of farm real estate ($40,000,000,000) is the smallest since the early 1920's. Low, too, is the ratio of chattel mortgage debt ($2,500,000,000) to livestock and other inventory values ($15,000,000,000). And, besides income from agriculture, farmers will take in this year an additional $3,000,000,000 or so for off-the-farm work, dividends, and interest on investments.

Biggest bonanza is in hogs. Hog production at 125,000,000 head (spring and fall) will probably be a duration peak as further expansion is limited by supplies of feed, and gross value should approximate $3,000,000,000. Meanwhile, the hog growers play a good thing in the form of the 14-to-1 hog-corn price ratio.

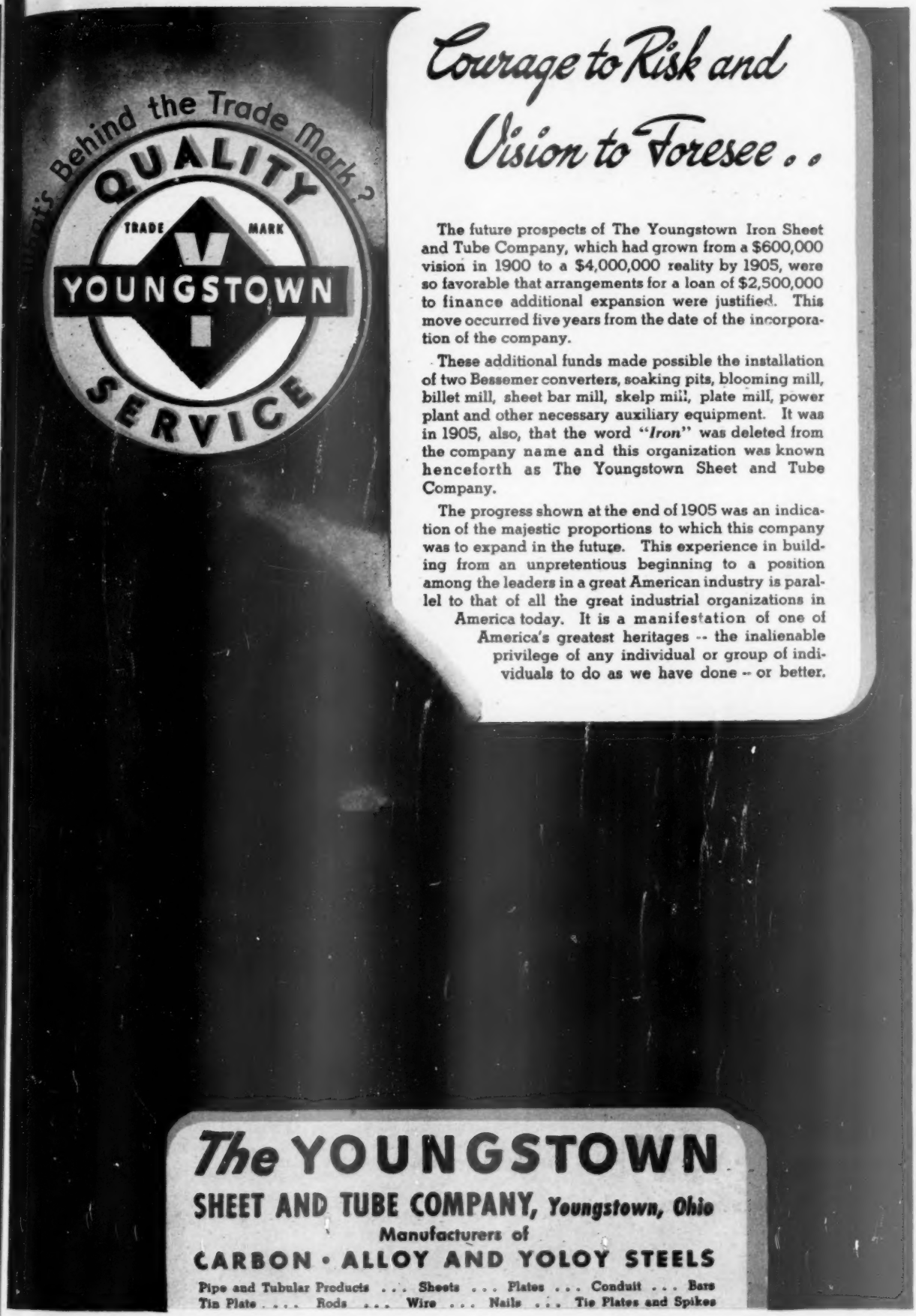
• **Leaner Porkers**—Hog growers are not paying much attention to War Food Administrator Chester C. Davis' request to limit sow breeding; the real check on hog production will come next spring. Indeed, the government may put premiums on medium-weight hogs in an effort to conserve feed for milch cows. However, the lighter weight, streamlined hogs shouldn't mean less pork meat for consumers, only less fat to be sold at pork prices.

Dairymen should gross at least $3,000,000,000 this year, what with government subsidies on milk, cheese, and butter, and the high lend-lease prices for evaporated and dry skim milk. Milk production won't come up to the federal goal of 122,000,000,000 lb.; will fall short, in fact, of the 119,000,000,000 lb. produced last year. But prices average higher than in 1942, and this should more than make up for reduced volume.

• **Drive for More Milk**—Midwest butterfat producers find small comfort in Davis' leaning away from butter toward proportionately more fluid milk as a better food nutritionally and economically, but the fluid milk producers everywhere applaud this shift from earlier policy. They expect and will likely get additional subsidies either by way of low-priced feed or by higher prices for milk.

Eastern dairymen already are getting a nickel subsidy on corn. In some marketing areas (Philadelphia, Wilmington, Washington to name a few), a government purchase-and-resale price support is in force.

• **Cotton Gain Is Forecast**—Southern planters are in the big money with a cotton-tobacco-peanuts combination ex-



Courage to Risk and Vision to Foresee . .

The future prospects of The Youngstown Iron Sheet and Tube Company, which had grown from a $600,000 vision in 1900 to a $4,000,000 reality by 1905, were so favorable that arrangements for a loan of $2,500,000 to finance additional expansion were justified. This move occurred five years from the date of the incorporation of the company.

These additional funds made possible the installation of two Bessemer converters, soaking pits, blooming mill, billet mill, sheet bar mill, skelp mill, plate mill, power plant and other necessary auxiliary equipment. It was in 1905, also, that the word "*Iron*" was deleted from the company name and this organization was known henceforth as The Youngstown Sheet and Tube Company.

The progress shown at the end of 1905 was an indication of the majestic proportions to which this company was to expand in the future. This experience in building from an unpretentious beginning to a position among the leaders in a great American industry is parallel to that of all the great industrial organizations in America today. It is a manifestation of one of America's greatest heritages -- the inalienable privilege of any individual or group of individuals to do as we have done -- or better.

The YOUNGSTOWN
SHEET AND TUBE COMPANY, Youngstown, Ohio
Manufacturers of
CARBON • ALLOY AND YOLOY STEELS
Pipe and Tubular Products . . . Sheets . . . Plates . . . Conduit . . . Bars
Tin Plate . . . Rods . . . Wire . . . Nails . . . Tie Plates and Spikes

What's Happening to the Cost of Living

	Food	Clothing	Rent	Fuel, Ice, & Electricity	House Furnishings	Misc.	Total Cost of Living
August, 1939.	93.5	100.3	104.3	97.5	100.6	100.4	98.6
January, 1941*	97.8	100.7	105.0	100.8	100.1	101.9	100.8
May	102.1	102.8	105.7	101.1	103.2	102.5	102.9
May, 1942 ..	121.6	126.2	109.9	104.9	122.2	110.9	116.0
June	123.2	125.3	108.5	105.0	122.3	110.9	116.4
July	124.6	125.3	108.0	106.3	122.8	111.1	117.0
August	126.1	125.2	108.0	106.2	123.0	111.1	117.0
September ..	126.6	125.8	108.0	106.2	123.6	111.4	117.8
October	129.6	125.9	108.0	106.2	123.7	111.8	119.0
November ...	131.1	125.9	108.0	106.2	123.9	112.7	119.8
December ...	132.7	125.9	108.0	106.3	124.1	112.8	120.4
January, 1943.	133.0	125.9	108.0	107.3	123.7	113.1	120.6
February ...	133.6	126.2	108.0	107.2	124.1	113.6	121.0
March	137.4	127.6	108.0	107.4	124.5	114.5	122.8
April	140.6	127.8	†	107.5	124.6	114.8	124.1
May	143.0	127.8	†	107.6	124.7	115.1	125.1

Data: U. S. Bureau of Labor Statistics; 1935—39=100.
* Base month of NWLB's "Little Steel" formula.
† Rent figures released quarterly.

pected to yield up to $2,500,000,000 this year. Cotton acreage, according to trade observers, will be bigger than government officials expect; they point to heavy fertilizer sales and the fact that a good deal of cottonseed meal that didn't get into the high-protein feed supply last winter has been put into the ground instead. Big incentive is the prospect for 20¢-and-better cotton.

Add at least $500,000,000 for flue-cured, burley, and Maryland tobacco, and not less than $150,000,000 for peanuts on a government guarantee of $130 to $140 a ton for goobers urgently wanted for oil and direct edible uses. Planters say that the production of peanuts will fall short of the government's 5,000,000-acre goal; since the acre financial return from cotton will average better than peanuts.

• **Danger of Shrinkage**—Cattle and calves should yield better than $2,500,000,000 this year—much more if a tight feed situation forces heavy marketings off the ranges, out of the feed lots, and from dairy barns. In this event, the supply of beef and veal would increase, but the cattle population at the outset of 1944 would be smaller than at the beginning of 1943.

In any case, the feed-lot, fat cattle industry is expected to decline as a luxury-food industry in time of war, more grass-fed cattle will fill shops, and range and feeder cattle will go to shambles. Fewer sheep and lambs are on farms and ranges this year, and the 1943 wool clip may total no more than 450,000,000 lb.

• **More Chicks Sold**—Poultry and eggs are in the $2,000,000,000 bracket this year with a sensational output of eggs and chicks, the latter causing Food Administrator Davis to ask for a slowdown on commercial broilers to conserve feed. Hatchery men have done a sellout business all year, with unfilled orders booked far in advance. Price ratios of poultry and feed are practically as good as hog-corn. Only stumbling block is inability to get feed at any price.

Biggest government worry is the over-the-fence peddling of poultry and the probability that despite high record production eggs will have to be rationed come midsummer.

• **Higher Fruit Prices**—Fruits, nipped in the bud by early frosts, will be a smaller crop this year but should yield close to $1,000,000,000 because of high prices; vegetables (including potatoes, sweet potatoes, and dry edible beans) should add up to $1,500,000,000.

The 1943 wheat crop (estimated at 730,000,000 bu.), at prices better than the 85%-of-parity government loan of $1.22 a bushel, should gross at least $1,000,000,000. Indeed, many operators look for much higher wheat prices before the crop marketing year is ended, for the total supply (1,300,000,000 bu. with the carryover of old wheat) won't be much greater than greatly expanded requirements (1,200,000,000 bu.). If a carryover larger than 100,000,000 bu. for the crop year starting July 1, 1944, is set aside by the government, some users won't be able to get all the wheat they want this season.

• **Windfall**—More than 100 commodities make up the total of farm production and income. A considerable item is the $2,000,000,000 (at farm, not retail, prices) of products consumed on the farms producing them. Add a billion for inventory gains and rental value of farm homes, plus a government windfall of continuing benefit payments.

The gross of $22,000,000,000 of prospective farm income this year compares with $19,000,000,000 in 1942, with $14,000,000,000 in 1941, and $11,000,000,000 in 1940.

Standing athwart a reliable 93-year-old producer, Quincy Mining's many-gabled shafthouse is one of the landmarks in Michigan's copper country.

Copper Recovery

Old high-cost producers in Michigan, under system of bonus payments, have achieved measure of former prosperity.

Things are humming again in the old Michigan copper mines, but it took a world war to get the boom started, and activity even now is not on anything like the scale witnessed in the last war. And it is only by means of government bonuses above the pegged 12¢-a-pound price for the red metal that these high-cost producers have been put back in operation at all.

• **The Ups and Downs**—During the World War, the Michigan copper country witnessed its greatest boom, employing 20,000 men and supplying much of the metal that helped lick the Kaiser. The industry managed to limp along in the following years but was knocked flat on its back in the depression of the 'thirties when copper fell almost to 5¢ a pound. (Average production cost in Michigan is close to 12¢.) Under today's tremendous demands for copper, employment in the Michigan mines has risen to 4,300.

It was just a hundred years ago that the first rush of prospectors and other fortune hunters from the East swarmed over the Keweenaw peninsula. But these newcomers weren't the first who had guessed the mineral wealth of this rugged neck of land jutting far out into Lake Superior from Michigan's upper peninsula. A book published in Paris in 1636 had talked of rich copper deposits found on the shores of Lake Superior.

• **Indians Used It**—In fact, use of copper in the area appears to date back to prehistoric times. Pits containing piles of charcoal and crude implements of copper and stone, attributed to Indians, have been found on Isle Royale, now a national park.

Explorations that started the rush of prospectors were those of Douglas Houghton, first geologist of Michigan. He covered the Keweenaw from 1840 to 1845, when his boat was swamped in a squall off Eagle Harbor. Houghton profited little from his discoveries, but an appreciative citizenry honored him by naming one of the copper country counties for him. In 1845, copper taken from outcropping veins and shallow deposits totaled 36,880 lb.

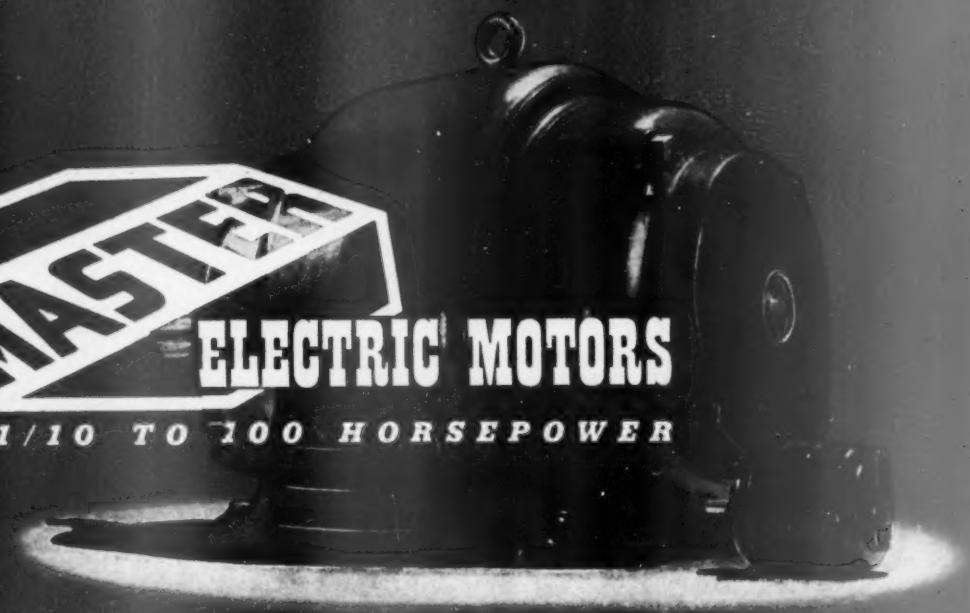
• **Second Largest Output**—From 1847 to 1887, Michigan was the country's leading producer of copper. The cop-

EXTRA PROTECTION OUTSIDE

The cast iron frame and end shields are so constructed that the internal working parts of the motor are fully protected from falling dirt or dripping liquids.

EXTRA PROTECTION INSIDE

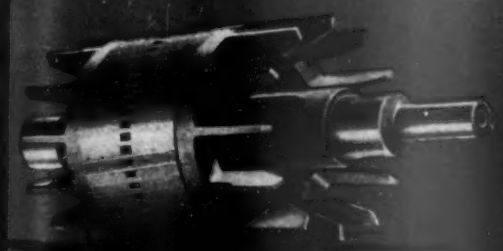
Windings are protected from unusual moisture or dirt conditions by special "baked in" insulation treatment which greatly increases the life of the motor.



MASTER ELECTRIC MOTORS

1/10 TO 100 HORSEPOWER

THE MASTER ELECTRIC COMPANY • DAYTON, OHIO

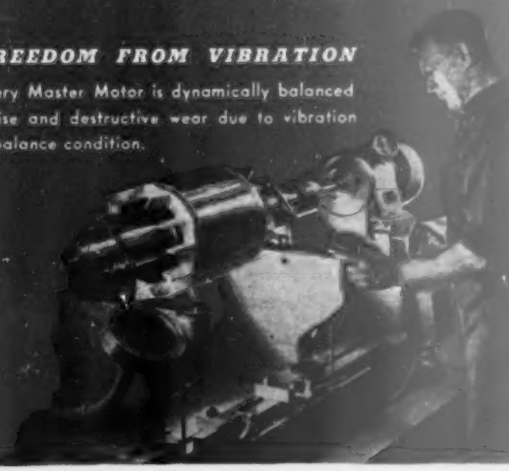


EXTRA RUGGED CONSTRUCTION

Unusually heavy alloy steel shafts and oversize bearings add greatly to the durability of Master Motors. In Squirrel Cage motors the rotor windings are cast integral with the rotor laminations.

EXTRA FREEDOM FROM VIBRATION

The rotor of every Master Motor is dynamically balanced to eliminate noise and destructive wear due to vibration from an out-of-balance condition.



per country has yielded, all told, abo 4,500,000 tons of the red metal (seco only to Butte, Mont.). But the de shafts of the leading producers—Cal met & Hecla Consolidated Copper C Copper Range Co., Isle Royale Copp Co., and the Quincy Mining Co.—in r cent times have been unable to compe with low-cost production of other area

However, under the quota system p into operation Feb. 1, 1942, by WP and OPA, these companies have bee able not only to operate their mines bu also to undertake some expansion. Quo tas are fixed according to cost of produ tion. For instance, the company with cost of 10½¢ a pound would be given 100% quota, which would mean a pric of 12¢ a pound for all its output; a com cern whose costs were 15½¢ a poun would get a zero quota, allowing it 17¢ pound on its production; or a compan might get a 50% quota, entitling it t 12¢ for half its output and 17¢ on th remainder for a 14½¢ average.

• **Now It's a Labor Problem**—Availa ability of manpower apparently will be the key factor in any further expansion of output. Miners moved out of the area during the depression, and more recently, there has been a further draft through Selective Service and the lure of war industries. The result is that the U. S. Employment Service has been trying to recruit labor from other parts of Michigan's upper peninsula.

BARRELS OF PAPER

Paper containers, capable of carrying an endless variety of paints, oils, and other liquids, are typical of war's revolution in the packaging field. Completely moisture-proof, the five-gallon drums are made of "chip" and kraft paper, impregnated with special chemicals while being wound at the Fibro Container Corp., Minneapolis.

"Let's start holding meetings Now

–AND HOLD THEM OFTEN!"

PRESENT; *Reading from left to right around the circle: Plywood, Magnesium, Synthetic Rubber, Electronics, Steel, Diesel Power, Aluminum, Welding, Plastics.*

Materials, machines, and methods will be needing new jobs with Victory—and on the proper employment of each one of them will hang the daily bread of millions of *us*. It's time for them to gather together, discuss their strengths and weaknesses, their qualifications for jobs in a world at peace . . .

Already, we've heard them talking. Right in the middle of their war jobs, they've spoken out to all who'd listen. *Steel*, telling of its new-found strengths. *Aluminum* and *Magnesium* of their feather-lightness. *Plastics, Plywood*, of quick forming of finished products—small enough to hold in your hand or large enough to live in. *Electronics* has whispered, through the censors, of a world to come when heat and light, entertainment and control; perhaps even power—will come to us more conveniently via electron tubes. *Welding* has learned to "sew" sheets of metal together at breakneck speed . . .

Diesel Power, too, has talked away on invasion barges, sent vital orders over far-flung wires, shouted along ahead of heavy trains. Auxiliary units have told their tales of wounded ships . . . brought safely to port . . .

Just to hear their voices is to form some idea of what the future holds. Not a Diesel World, or a Plastics World, or an Aluminum or Electronics World, but a far better world gained through the best use of all of them, co-operating.

• • •

It would be fine if machines, materials and methods could sit down and talk our post-war problems out. But the men behind those things must do the talking. You might like to talk it over with us, for instance. We'd like to meet you. Rogers Diesel and Aircraft Corporation, 1120 Leggett Avenue, New York, N.Y. Divisions: Hill Diesel Engine Company, The Edwards Company, Edwards Aircraft Products, Inc., Ideal Power Lawnmower Company.

Diesel Engines, 5 to 2000 h.p. • Gasoline Engines • Generator Sets • Generators • Power Units • Switchboards • Pumping Units • Hydraulic Aircraft Equipment • Recoil Mechanisms • Power Mowers • Power Brushes • Snow Removal Equipment • Streamlined deluxe Railway Motor Trains • Diesel Locomotives

ROGERS DIESEL AND AIRCRAFT CORPORATION

New Orleans produces a wide variety of watercraft for war. One is the Higgins crocodile boat for landing fully equipped troops and small tanks and trucks.

Old City Hums

Leisure and fine living of New Orleans are brushed aside by bustle of vast—though belated—war business.

New Orleans business men have had an uphill fight to convince visitors that their city is not only a unique playground but also a great business center. Today the argument is swamped under a belated war boom. The old town is roaring with a production expansion that is attracting workers from the dreamy bayous; its hot spots are jammed with free-spending customers from plants and military posts.

• **Peak Is Still to Come**—Other cities have reached the flood tide of war activity, and some are worried because military orders are slacking off. In New Orleans, the upsurge of war production was only recently felt, and the peak is yet to come.

The first contracts for war implements went to cities with established industries which could deliver—quick. New Orleans depended largely upon her shipping, cotton, and a hinterland of farms, hence had few metal manufacturing plants that could be quickly converted.

• **Ship and Plane Plants**—As the older centers became saturated with orders, New Orleans business interests got busy, and the plants they obtained are now swinging into their stride. The items being delivered are varied, but airplanes and ships make up the largest percentages.

Today the soldier at a nearby camp makes a beeline for Canal Street as soon as he gets his leave. Since the concentration of Army, Navy, and Coast Guard posts, bases, hospitals, depots, and training centers is about as heavy as anywhere in the country, the dollar aggregate of their diversions is tremendous.

• **Store Sales Mount**—From 1939 to 1941, the percentage of gains in New Orleans department store sales was below the national averages. But in the 1941–42 period, the gain was 15% compared to the national total of 12%. And for the first quarter this year, New Orleans gained 21%, while the national figure remained at 12%.

New Orleans factory employment has been consistently ahead of the national average, but in the past two years gains have been especially dramatic. Using 1937 as the index of 100, the New Orleans figure for 1939 was 95 while that of the U. S. was 92. In November, 1941, the New Orleans employment figure was 147 and that of the U. S. 125. By March this year, New Orleans employment had jumped to 254, while the total U. S. was only up to 154.

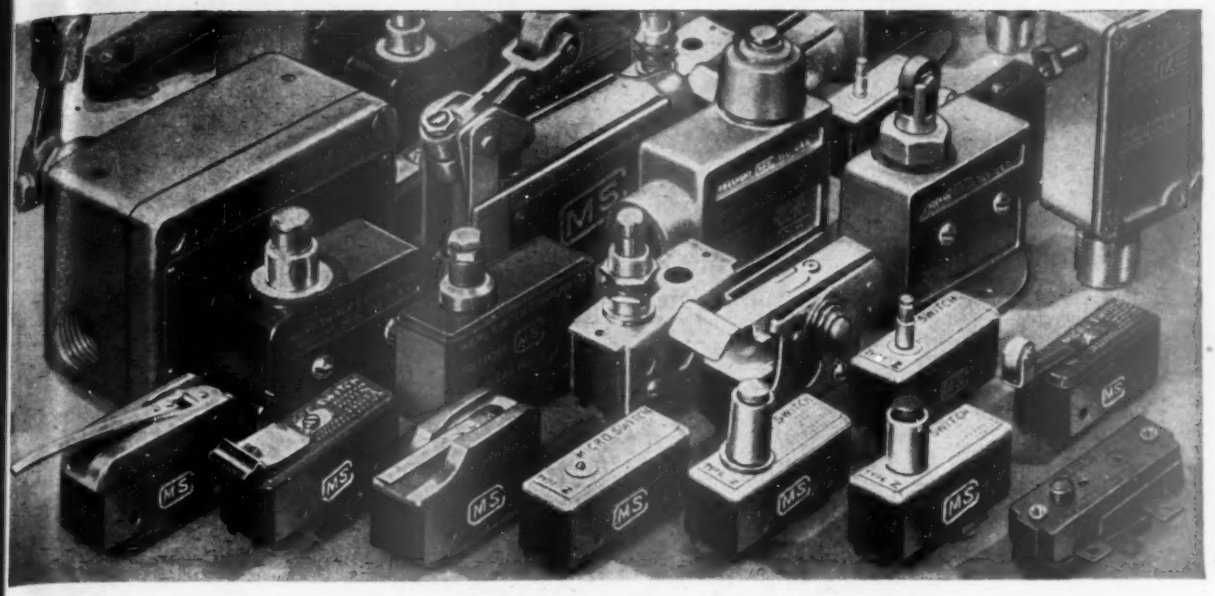
• **Population Soars**—Persons trying to get booking at hotels or find a place to live will testify that "the town is busting at the seams." The federal 1940 census put the population at 490,000. In May, 1942, a federal estimate raised the figure to 575,000; local estimates today top 600,000.

This army in overalls is required to keep the wheels spinning in war plants that have sprung up through expenditure of $250,000,000. As a result, New Orleans, which has always been important as a seaport and commercial center, now claims a comparable leadership in the South as a builder of planes and ships.

• **New Plane Plants**—Two new aircraft plants soon to be in production measure their floor space in acres. One belongs to Consolidated Vultee Aircraft Corp., the other to Higgins Aircraft, Inc.

Tooling of Consolidated Vultee's $9,000,000 plant is nearing completion. It will begin production of giant Navy

Suddenly geared to a belated war boom, New Orleans is swamped with a tidal wave of business. Along Canal St. (left), merchants of luxuries and necessities are thriving on a crop of free-spending soldiers and war workers. Even the picturesque Vieux Carré (right) no longer is a luxurious Mecca for tourists and native gourmets.



MICRO SWITCH

now means 2,109 Switches

Micro Switch started out to be a thumb size, feather light, high precision switch designed for accurate, dependable and million-life operation under small force and movement differentials. Today, Micro Switch is 2,109 different combinations of electrical characteristics, housings and actuators.

These 2,109 different combinations have been developed through close cooperation with customers' design problems. We have developed Micro Switches that are explosion-proof, that are moisture and dust and oil-proof, that are resistant to shock and vibration.

Today you can secure Micro Switch to control the most delicate instrument, operating on a force of ¼ ounce with a plunger travel of .0002"; or you can secure Micro Switch enclosed in heavy gauge steel with a husky roller actuator that will stand the terrific pounding of a huge punch press.

For aircraft, Micro Switches are enclosed in aluminum housings with actuators adjustable to suit pre-travel and over-travel requirements . . . All perform satisfactorily at 45,000 feet altitude and meet every gravity test requirement . . . Steel enclosed Micro Switches, originally intended for machine tools, are doing heavy duty service in tanks . . . Other Micro Switches are serving on the high seas. Micro Switches are easily replaceable through the use of simplified mountings. This permits quick salvage and reinstallation in the field.

This extremely wide range of combinations which Micro Switch can provide means a lot of designing engineers who are now, or who will soon be, faced with the designing of postwar products.

It is advisable that your engineers become fully acquainted with Micro Switch. We will be pleased to send your engineers as many copies of Micro Switch handbook-catalogs as they may require.

The trademark MICRO SWITCH is our property and identifies switches made by Micro Switch Corporation

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BUY ALL THE BONDS YOU CAN

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MICRO SWITCH

Made Only By Micro Switch Corporation . . . Freeport, Illinois

patrol bombers (P4Y-1, said to be the fastest of its type) about the first of the year. The plant occupies 44 acres fronting Lake Pontchartrain.

• **Fight for Business**—The Higgins project is a monument to a local boy who wouldn't be licked. Site of the plant at Micheaud, La., where Andrew Jackson Higgins was preparing an assembly line shipyard for building Liberty vessels (BW—Oct.17'42,p28). The Maritime Commission stopped construction of the yard when it found that it had overestimated the number of ways needed.

Higgins and son A. J. Jr. hot-footed it to Washington with a plan for building cargo planes that would use mostly plastic-impregnated wood instead of critical metals. They were cold-shouldered by the Army, but President Roosevelt stepped in, and Higgins returned with a $200,000,000 contract for 1,200 Army freight planes (BW—Dec.19'42,p26).

• **Many Higgins Boats**—While rushing his aircraft plant into production, Higgins continues to figure importantly on the marine front. Higgins Industries has six boat-building plants and the Higgins-Tucker engine plant in the New Orleans area. The latter is now tooling up, will produce engines for planes and boats. By last spring, the companies employed 2,000 persons. But the figure took a decided bulge in April when the Army gave Higgins new contracts for $40,000,000.

This order was for 100 new-type steel cargo vessels, each 168 ft. long. The first probably will be delivered this month and the contract calls for all of them by the end of the year. This hush-hush ship is one of many specialty models being ground out at the Higgins plants.

• **Other Shipyards**—New Orleans now has six big companies producing craft ranging from Liberty ships on down. In addition to Higgins, the principal concerns are Delta Shipbuilding Corp., Pendleton Shipyards Co., Avondale Marine Ways, Neptune Supply Co., and Lester F. Alexander Co. The Todd-Johnson Dry Docks, Equitable Equipment Co., Allen Boat Works, and a number of other firms build small boats.

Neptune has greatly expanded its production in recent years. It now has three plants in New Orleans and is one of the country's biggest producers of such marine safety equipment as lifeboats, life rafts, and life preservers.

• **Working Light Metals**—Pan-American Alloys, established about a year ago, is more or less typical of many smaller plants which have sprung up to serve the larger producers. It makes rough castings from magnesium and aluminum for aircraft and watercraft engines; it is said to be the only shop of its kind in the South.

Old-timers may not like it, but war has brought a new tempo to the cafes and business offices. You can still get your sazerac cocktail, dine on oysters

Rockefeller, shop for antiques underneath the grilled balconies in the old French Quarter, visit snooty night clubs or low-down honky-tonks. But the traditional two-hour lunch is out, and the urgencies of war production intrude at dinnertime.

• **Will the Past Survive?**—Old New Orleans, with its Mardi Gras, its race track, its indigenous drinks and music, its famous dishes, is a national asset. If it can preserve just enough of the present industry and bustle to round out a sound peacetime life, both the ancient families and the Assn. of Commerce ought to be satisfied.

Co-ops Go Urban

Rural electric distribution societies invade more populous fields in Arkansas, stir utilities to seek discriminatory rates.

The tendency of rural electric co-operatives in Arkansas to reach into the villages has brought a demand from two utility corporations for an official definition of the proper sphere of co-ops.

• **Stay on the Farms!**—Arkansas Power & Light Co. and Oklahoma Gas & Electric Co., which sell energy at wholesale to distributing co-ops, alarmed by the spread of the co-ops into populous centers, have asked the Arkansas Utilities Commission to permit them to charge a higher wholesale rate for that part of their energy which the rural lines resell in villages of more than 250 population or to industrial users whose demand exceeds 30 kva.

The contention of the utility corporations, as developed in recent hearings before the Arkansas commission, is that the co-ops should stay on the farms and out of the villages and not undertake to supply power for clearly industrial uses. These are fields the utilities wish to keep for themselves.

• **Four Co-ops Involved**—No such distinction was made in the contracts under which the utilities supply the energy distributed by the Arkansas co-ops. Thus far, only four of the state's 17 electric co-ops have customers outside the strictly rural field.

An engineer for the Rural Electrification Administration told the commission the rate differential proposed by the utilities would add $20,000 a year to the bills of village and small industrial consumers. C. Hamilton Moses, president of Arkansas Power & Light, asserted the increased charge would be only $10,000 a year.

• **Might Crop Up Elsewhere**—This situation might be duplicated in many other states, as the 800 rural electric co-ops in the United States buy half their en-

ergy from privately owned utilities at an average cost of about 1¢ a kilowatt-hour. The other half they generate themselves or buy from publicly owned projects at an average cost of 8.1 mills a kilowatt-hour. All the energy distributed by the Arkansas co-ops is bought from private utilities at average cost of 9.1 mills a kilowatt-hour.

Sharing the Water

States drained by Missouri River organize to seek compact for protection of basin interests; enabling bill in Congress.

Eight states of the 600,000-square-mile Missouri River basin have formed an interstate committee, based on the plan of the advisory committee of 14 formed by states of the Colorado River basin (BW—Jun.5'43,p18), and for the same purpose—to protect local interests in the development of the basin and ultimately to work out a compact similar to the Colorado River compact. A bill now pending in Congress would authorize such a compact and would give the states until 1946 to present one to Congress and the President for approval.

• **Two from Each State**—At an organization meeting in Omaha, Gov. M. Q. Sharpe of South Dakota was named chairman, and George Knapp, Kansas state engineer, secretary. Membership is composed of two persons from each state, who are appointed by the governor.

As in all western river basins, interests of the upper and lower states are sharply divided and at times conflicting. Montana, Wyoming, and North and South Dakota, the four upper Missouri basin states, are primarily interested in irrigation and power possibilities. Last year, they began talks among themselves and soon decided it was better to confer at once with the four lower basin states, Missouri, Iowa, Kansas, and Nebraska, primarily interested in flood control and navigation. The new organization was the result.

Colorado, which originates much of the Missouri basin's water through the North and South Platte rivers, was invited to join, but its officials think that, for now at least, the state is sufficiently protected by upper-stream compacts. Minnesota has a tiny corner of the Missouri drainage but, for the present, isn't interested either.

• **Federal Government Excluded**—Two other recent High Plains water developments:

(1) A compact among Colorado, Kansas, and Nebraska dividing the waters of the Republican River (a Missouri

basin stream) is unique in the extent to which it shuts out the federal government. The latter must consult with the states before launching any federal program and must recognize as property rights the established uses of water there for irrigation and domestic purposes. So strongly asserted are these local rights that President Roosevelt, in signing the compact, said it must not be taken as a precedent. Colorado gets 54,100 acre-feet annually of the estimated flow, Nebraska 234,500, and Kansas 190,300.

(2) The 40-year-old feud between Colorado and Kansas over use of the upper waters of the Arkansas moved a step nearer settlement with a report to the Supreme Court by Charles C. Cavanah, special master, which would award Colorado 910,000 acre-feet yearly, Kansas 185,000. But Kansas objects to Colorado's getting so much, and Colorado objects because most of the Kansas allotment must be let down in summer, when it is most needed in Colorado as well as Kansas. So the court will hear further briefs and argument, perhaps for years.

Tubes Due Back

Armed services steered out of civilian markets so that silenced home radio sets may be restored to use.

The armed services' buying spree in civilian radio tubes is about at an end. Pressures created by squawks from civilians and exerted in the right places by the Office of War Information are expected soon to end the shortage of tubes for civilian receivers, most acute in metropolitan areas.

OWI's plugging for radio listeners should produce some results at WPB and in the military high command in the shape of relief for the silenced radio set in the home.

• **Hitting the Quota**—The ten tube manufacturers set out this year to produce 2,000,000 tubes a month for civilian replacements. In April, they fell down a bit and made only 1,650,000 but achieved the quota in May and expect to do so in June. Since September, 1941, they have doubled their floor space and more than doubled their capacity, but the mounting demands of Army and Navy absorb all they can make. Labor shortages have been serious.

WPB now allows manufacture of 117 types of tubes, as against 700 made before Order L-76 was issued. Tubes most in demand are the six types that are generally used in small a.c.-d.c. sets and likewise the ones that brought dealers least profit. WPB ordered that

TIMELESS TIMEPIECES

In wartime, the Army finds a use for almost everything—even for old and broken clocks. At Midland, Tex., the Air Forces' bombardier school converts the tangled springs and gears into classroom model bombsights. The school's commander, Col. John P. Kenny, now has 250 of the tickless tickers collected by Boy Scouts at Fayetteville, Ark.

tubes for civilians be stamped MR to discourage their sale to the military (BW—Apr.24'43,p2). The MR stands for "maintenance and repair" and not "military reject," but WPB insists that military rejects are good buys if you can find them.

• **Master Schedule?**—Other steps also are under consideration. Manufacturers may be told to make a specific number of a specific type of tubes, or a master schedule may be drawn up detailing the kinds of tubes each maker shall produce which will include a quota for home users. Since manufacturers have been in the habit of running off a certain batch of one type and then retooling for another type, this master schedule is seen as a means of eliminating waste time and effort.

All tubes use as little metal as possible, for the critical shortages in copper, aluminum, tungsten, nickel, and molybdenum have not been lightened. WPB Order L-265, issued June 5, required that tube buyers turn in an old tube or a certificate of necessity—which applies to the military as well. Regular requirements of the armed forces are being met by giving them right of way at the factory.

NEW SKILLS WE ARE LEARNING...

FOR NOW AND TOMORROW

IN THE MIDDLE of filling the biggest order for goods in the World's history, American Industry is hard at work on the building of tomorrow. Not in any visionary style, but in ingenious design and practical production right now of better, cheaper, tougher war products.

Lots of these today's products may look like anything but the kind of tomorrow we want—guns, fighting planes, amphibian jeeps . . . But behind them are new methods, materials, machines—yes, and new men. New skills of all kinds have been learned to build for Victory—and those skills are what will build tomorrow!

Here at Roebling we've learned new skills, too—in making and applying wire rope, and electrical wires and cables, weaving wire cloth, and rolling steel . . . All of these are already at work on Uncle Sam's fighting equipment. Tomorrow, they and the new skills that produced them are going to work for you to help turn out the better, cheaper, tougher products tomorrow will demand in world volume.

ROEBLING

Metal Time-Saver

Briquetting and sintering of ferrous powders and alloys save time and machining; gage parts among latest products.

War-inspired developments in powder metallurgy are saving millions of man-hours of labor as well as millions of pounds of critical materials. By specifying powder-metal bearings and structural parts instead of cast or wrought products in 1942, Chrysler Corp. saved 5,000,000 man-hours of skilled and semiskilled labor on one war contract alone and, during the current year, will avoid tying up 5,000,000 lb. of critical material because the process virtually eliminates machining scrap.

• **Idea Is Not New**—Chrysler's Amplex Division is one of five concerns handling 90% of the business of making bearings and parts to finished form and dimension by briquetting and sintering metal powders. Yet powder metal is not a war baby. Cemented tungsten and tantalum carbides have been made for 14 years for the cutting-tool field. Self-lubricating porous bearings, impregnated with oil, antedate the cutting carbides by many years, and millions of these bearings were used annually before the war in automobiles, domestic appliances, industrial equipment.

Although peacetime applications seldom called for bearings weighing more than 3 lb., the know-how was developed for turning out ordnance bearings weighing over 60 lb.; others twice that weight will soon support gun mounts. The truly severe aircraft and ordnance applications are still satisfied with bronze oil-less bearings, but Amplex, Moraine Products Division of General Motors, Bound Brook Oil-Less Bearing, Keystone Carbon, and United States Graphite are today making bearings from iron-copper and pure iron materials as a means of saving the copper consumed in bronze.

• **Many Aircraft Parts**—The production of structural parts for planes and ordnance is one use of powder metals that has gone forward by leaps and bounds in the last 18 months. Intricate pieces that would otherwise require many minutes and even hours of machining are turned out in from 1 to 15 seconds by the briquetting process.

The technique of making these high-density parts is akin to that used for the porous bearings; powders are mixed and screened, briquetted to one-third the powder volume, sintered to develop

PRODUCTION BOOSTER

Considerable production time formerly was lost between machine runs in Belden Mfg. Co.'s stranding department. When an operation was completed, word was passed to a supervisor who in turn ordered the stock room to supply materials for the next job—while the machine stood idle. Then someone got the idea of using signs. Now when a run nears completion, the operator hoists a red card: "Job Running Out." A foreman tickets the machine for its next job and replaces the sign with a green one, reading: "Wire Needed." This brings a stock man with the needed materials. Result: an 80% cut in idle machine time, hence a production boost.

strength in the green compact, sized mechanically, and given supplementary heat-treatment if necessary to develop adequate strength.

• **Strengths Increased**—An ultimate tensile strength of 35,000 psi. is cataloged by one manufacturer for a 75% iron and 25% copper material sold for heavy-duty machine parts, but even greater strengths are obtained by alloy additions to ferrous powders. The newest thing in powder metals, in consequence, is the manufacture of alloy steel gage parts and toolmakers' accessories.

Much of current production in powder-metal bearings and structural parts is related to speeding production. The customer receives parts that need little or no machining prior to assembly, he is not required to set up machine tool lines, and there is no need to design and build tools and fixtures.

On a cost basis, too, powder metals win out.

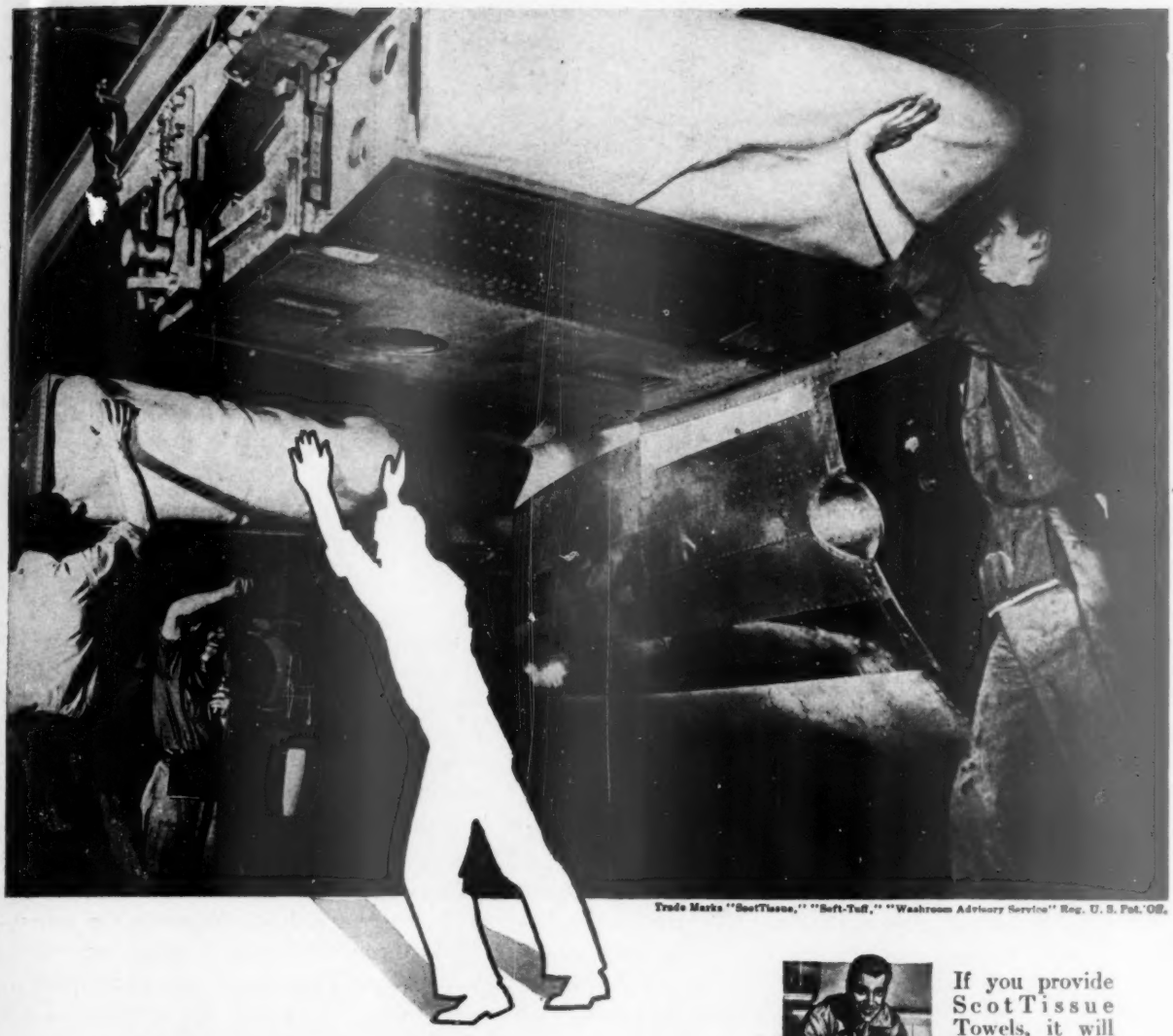
Insect War Aided

New synthetic insecticide stretches—and in some cases, it improves—rotenone and pyrethrum, both now scarce.

Seventeen years of research at the laboratories of Rohm & Haas Co. of Bristol, Pa., has resulted in the introduction of Lethane 60, a synthetic insecticide, which this year is destined to stretch available supplies of imported rotenone so that millions of dollars worth of vegetables will receive protection against insects without danger to human beings.

• **Induced by Control Laws**—Experiments were begun in 1926, a year before

To test the sticking qualities of farm insecticides that contain Lethane, Rohm & Haas laboratories at Bristol, Pa., simulate growing conditions with a "rain maker." Bug killers that adhere save farmers plenty of money.



Trade Marks "ScotTissue," "Soft-Tuff," "Washroom Advisory Service" Reg. U. S. Pat. Off.

THE MISSING MAN

Illness can be spread—or checked—in your washrooms

BY FAR the worst cause of industrial absence is sickness. It keeps every worker off the job an average of one week each year. Over half of this loss is due to "minor" contagions that spread from worker to worker.

This spread of disease is aided by inadequate washrooms. On the other hand, clean, well-equipped washrooms encourage workers to wash up often. Soap, hot water and individual tissue towels are checks to the spread of contagions.

A good architect can suggest many ways to make your washrooms sanitary, efficient and attractive—washrooms that guard health and build good will.

THE SCOTT WASHROOM ADVISORY SERVICE—A careful survey of your washrooms is offered by the Scott Washroom Advisory Service. It may be able to recommend improvements in hygiene, comfort and efficiency.

If you provide ScotTissue Towels, it will suggest ways to prevent waste, so that other companies can share the supply. For example, our educational material reminds workers that *one* ScotTissue Towel dries completely.

In fact, a single "Soft-Tuff" ScotTissue Towel can absorb twice the water left on hands after washing. And it has ten times more rub strength than previous ScotTissue Towels, though soft as ever.

Also available on request—our *Health Is Ammunition, Too* booklet and posters—proven aids in establishing a broad industrial health program.

Scott Paper Co., Chester, Pa.

SCOTTISSUE TOWELS
STAY TOUGH WHEN WET

Today this flag flies over

From this world headquarters for radio-electronic research flow new weapons, new discoveries and inventions vital to the winning of an Allied victory!

TODAY, over RCA Laboratories, flies a new distinguished battleflag—the coveted Army-Navy "E" Award.

One of the few laboratories in America to receive this award, RCA is at once proud of this distinction, and humbly aware of the responsibilities that it imposes. For much of the progress of the entire radio-electronic industry stems from the work done in these laboratories.

It was perhaps with this thought in mind that —at the dedication of the RCA Laboratories in Princeton—the Chief Signal Officer of the Army called them "The Hidden Battlefront of Research."

HIDDEN—because, for the duration of the war, this magnificent building of 150 separate laboratories must be closed to all but the scientists and research technicians who are working on radio-electronic instruments important to our military effort.

BATTLEFRONT—because in the waging of modern warfare, radio-electronics is of first importance. It follows the flag and the fleet—locates the enemy—flashes urgent orders—safeguards the convoy—guides the bombers—directs the artillery—maneuvers the tank. This science fights on every front.

And when that certain day of Victory comes, RCA Laboratories will be devoted to the happier task of making our peacetime world richer, safer, more enjoyable and more productive—through new and finer products of radio, television and electronic research.

OTHER SERVICES OF RCA WHICH HAVE EARNED OUR COUNTRY'S HIGHEST WARTIME AWARDS

The Army-Navy "E" flag, with two stars, flies over the RCA Victor Division plant at Camden, New Jersey.

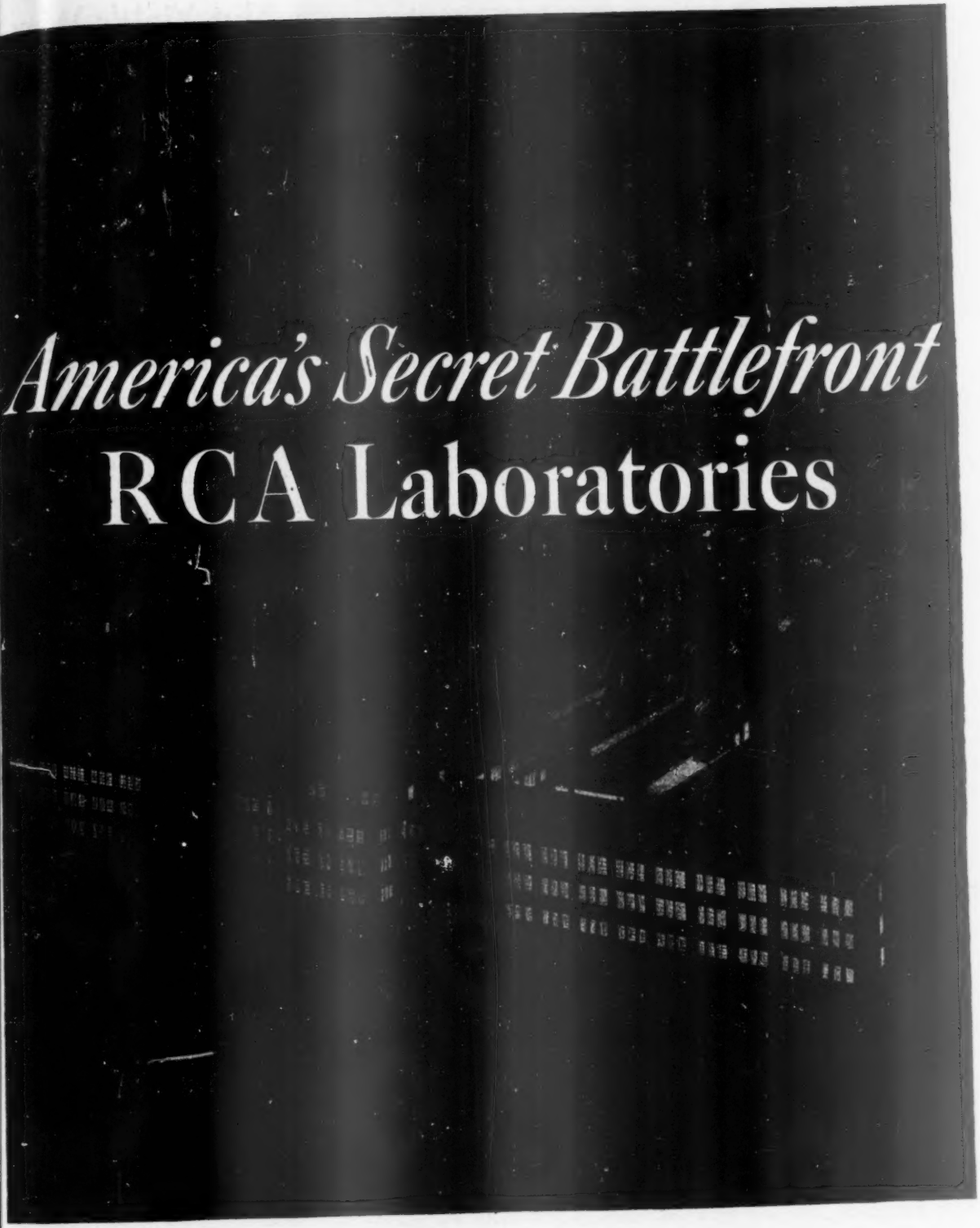
The Army-Navy "E" flag, with one star, has been presented to the RCA Victor Division at Harrison, New Jersey.

The Army-Navy "E" flag, with one star; also the U.S. Maritime Commission "M" Pennant and Victory Fleet Flag have been awarded to the Radiomarine Corporation of America in New York City.

A Service of
Radio Corporation of America

RCA

WORLD HEADQUARTERS



Laboratories

FOR RADIO-ELECTRONIC RESEARCH

MACHINERY MENDERS

Saving precious machinery, time, and money in construction of the huge Fontana Dam, the Tennessee Valley Authority operates its own repair and maintenance shops at Knoxville. Shopmen even design new equipment—such as a special air-operated concrete conveyor bucket (above left) which empties seven times as fast as manual types. Novel methods are used to repair 1½-ton tractor tracks (above right) and cogs on drive gears (below left).

the Dept. of Agriculture started testing rotenone in the hope of discovering an insect control agent which would leave no residue harmful to the consumer on crops. The search was initiated in the wake of new laws governing arsenic and fluorine residues. It was found that rotenone—used by the Chinese for centuries but unknown in this country—filled the bill as both a contact and a stomach poison for insects.

Rohm & Haas was exploring the synthetic field to discover a substitute for pyrethrum in combating the house fly, although control of agricultural pests was also in mind. The result was Lethane, an organic thiocyanate. Today Lethane 384 and Lethane 384 Special are important ingredients not only in household sprays, but also in those for livestock and industrial uses.

• **Extensive Tests**—The agricultural phase of research proved more difficult and consumed more time. It involved laboratory trials on wide varieties of insects and plants under simulated climatic conditions, and then extensive field tests. In every instance, it was found that where dusts containing 0.75% to 1% rotenone were effective in the past, mixtures of 2% Lethane 60 and only 0.4% rotenone, or 3% Lethane 60 and 0.25% rotenone, were equally effective. In some cases, the new mixtures were better.

Since plants yielding rotenone require an 80-in. annual rainfall, they cannot be grown in this country. Source of 60% of the substance was the derris plant which thrives in the Malay Archipelago, now occupied by the Japanese. The rest comes from Peru and Brazil where record crops of rotenone-bearing cube, timbo, and barbasco are being harvested, but labor and shipping difficulties are a big factor in holding down imports from these South American sources of supply.

• **Rotenone Is Restricted**—Commercial quantities of rotenone began arriving in the U. S. in 1931 and grew steadily until the war interfered. The 1936 total was 2,340,000 lb. and the 1938 figure nearly doubled that. This year we could use at least 10,000,000 lb. However, we are not likely to get one-third that amount, and the WPB is restricting use of rotenone dusts to such crops as beans, peas, and cole crops (excluding cabbage) where it is most vital. Even so, these are limited to 0.5% rotenone, which is 25% to 50% under the quantity formerly used.

Lethane 60 also has proved valuable with pyrethrum to control loopers on cabbage and for killing leafhoppers on many vegetables, particularly Florida's bean crop. It halves the amount of pyrethrum previously needed. This, too, is good news for farmers since pyrethrum's chief source is Kenya Colony, Africa.

Nut Yields Wax

Glidden Co. sees postw advantage in cultivation of joj ba bush; will build fractionatin still for new adhesive.

As a direct result of its expandi search for new materials, the Glidd Co. has announced its interest in t natural products that may hold postw significance for industry: (1) the jojo (pronounced ho-ho-ba) nut, from desert bush that has been cultivated su cessfully in recent experiments, and (mycrene, a product of turpentine dist ling, from which a rubberlike mater is processed for surgical adhesive dre ings.

• **Yields Liquid Wax**—The jojoba nu says Adrian D. Joyce, president of th Glidden Co., yields a liquid wax bett for his purposes than carnauba wa which has been imported from Braz for many years. In addition to its u in varnish, floor wax, and other formul tions, the nut is a possible source of natural rubber especially resistant acids and alkalis.

Chief interest in the jojoba nut is its possibilities as a cash crop for dese and semidesert areas of Arizona, Ne Mexico, California, Lower Californi and Sonora, Mex. Glidden would pa $200 a ton for jojoba nuts now, bu future prices would depend somewh on value of its products. Growing e perience has not yet been sufficient t estimate yields.

• **Indigenous to Arizona**—To start th jojoba bush growing in the Southwes Glidden has purchased a 640-acre trac near Florence, Ariz., where it is to b cultivated under irrigation. The bush i indigenous to that arid region, but i years of drought, it does not yield.

The jojoba nut is about the size of a large peanut kernel. The hull contain one or two kernels. Experiments wit interbreeding aim to develop the two kernel variety for higher yields. On trouble with gathering them from wil bushes has been that they are eaten o by deer, cattle, and rabbits. Researc work in propagation has determined tha the best balance is one male to each te female bushes, which means that one i eleven is unproductive.

• **Mycrene Still**—To produce mycrene which would not compete with natura rubber, Nelio Resin Co. of Jacksonville, Fla., a Glidden subsidiary, will build a fractionating still in connection with one of its turpentine refineries. The adhesive made from mycrene, Glidden officials say, has the unusual quality o sticking to the skin but not to a wound. Its manufacture may help sustain a strong demand for turpentine after the war.

An Editor takes his pen in hand...

[Reproduction of an editorial in The Dallas Morning News, June 3]

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Power for Victory

In the war news, the big headlines go to the air raids, the commando landings and the taking of large territories and great cities. The loudest acclaim naturally goes to those who take the biggest risks and make the most sensational achievements. Yet full credit should also go to those on the home front whose daily service is essential to victory. This vast group includes not only those who build ships, planes, tanks and other war equipment but every person who works faithfully in an industry that is bolstering the war effort.

The electric power industry, for instance, is one without which no other war industry could operate. There must be power for the lathes, punches, riveters and other machines that make our war weapons, power to light our factories for night shifts, power to take workers from their homes to their jobs and back. One of our main defense aims is to protect our power plants; one of the main objects of our bombers is to destroy the enemy's generating plants.

General Cable Corporation, which makes wires and cables through which electric power is transmitted, does well to call public attention * to what the power industry is doing to hasten the day of victory. This industry has given the United States more electric generating capacity than all the rest of the world and has delivered this power to the places where it was most needed and could most readily be harnessed to the war effort. In this and other essential industries, every worker should know that victory depends on his doing his part and should have recognition for unusual performance.

...rmoil in Y...oslavia

...hose w...

* The advertisement referred to by this editor was only one of a series we have been running. Others called attention to the equally vital service of the men of our Railroads, Communications Companies, Electrical Wholesalers and Contractors.

GENERAL CABLE
CORPORATION

MANUFACTURERS OF BARE AND INSULATED WIRES AND CABLES FOR EVERY ELECTRICAL PURPOSE

Solid Molasses

Dehydration cuts bulk by 40%, facilitating shipment from Caribbean isles to U. S. alcohol plants; still experimental.

Molasses now piled up in Caribbean islands because of lack of tankers to ship it to the U. S. (which needs it for industrial alcohol used in munitions and synthetic rubber) may be moved in greater quantities if a new dehydrating process and packaging adaptation prove commercially feasible. Dehydration would permit utilization of dry cargo space and boost off-shore shipments of molasses to the mainland to the extent that such space is available. Saving in shipping space is estimated at 40%.

• **Water Content Reduced**—The engineering division of the Board of Economic Warfare reports that boiling equipment found in sugar mills can reduce the water content of molasses 5%. The hot sirup is poured into special waterproof paper bags, cooled, and is then ready for shipment as dry cargo. Each bag holds about 200 lb. of solidified molasses and will withstand temperatures up to 150 F. without melting.

Upon arrival at a molasses distillery the hunks of molasses are split open with an ax and tossed into vats of water. They need not be peeled, for the paper bags can be skimmed off or the solution drained from the bags without affecting its qualities for making alcohol. Feed cannot be made from such reconstituted molasses.

• **Some Bugs Remain**—Public service patents have been applied for which will make the process available to any interested concerns, but since only small-scale dehydration has been tried in the experiments, BEW warns that interested companies will have to eliminate some "bugs" before large-scale commercial packaging is feasible.

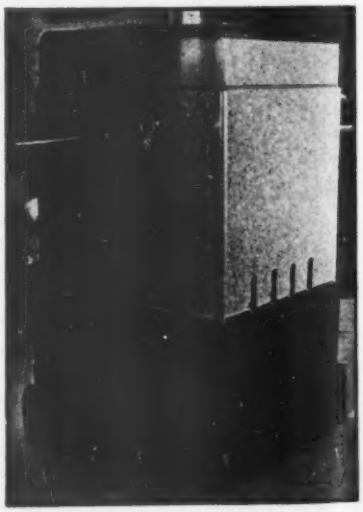
Heat—à la European

Ceramic stoves (above) have been used for centuries throughout Europe to heat houses but never got to first base in America. Next winter, stoves of clay, with the War Production Board's blessing, will get their inning here. Beginning July 1, they will go into production in hundreds of potteries located so as to ease the distribution of the bulky 500-lb. units. Present stove makers may assemble and market the products, but a large mail order house is also hot after the business.

To sell for about $60, the clay stove will burn coal or wood, go all day on a single charge of fuel, and deliver more B.t.u. than metal stoves, WPB's Clay Products Unit claims. And only 1½ lb. of metal is needed for each unit.

Although tile stoves are old stuff, government researchers could find no technical information on their manufacture. They started from scratch to determine what clays would not crack from alternate heat and cold, then, from an experimental stove which produced 35,000 B.t.u. an hour with hard coal, turned out the final design.

Built around a ceramic grate, thick clay walls pierced by vertical air flues act as radiant insulators, absorbing heat and holding it for hours.



New Jobs For New Brass

For thousands of years brass has been a faithful, tireless servant of man. Wherever there are tough jobs... jobs no other metal can tackle, brass has been given the assignment.

It is the same in this war—except that the assignments have been tougher, more downright exacting than ever before. And brass has come through magnificently... because it lends itself so easily and accurately to new and specific demands.

New alloys are being converted with almost unbelievable speed and accuracy into war equipment ...into shell cases for guns...condenser tubes for ships...fuel lines for planes...vital parts for tanks, trucks, jeeps, half-tracks. They are made possible here at Bridgeport by time-proven craftsmanship, modern metallurgy and such extensive facilities as the "battery" of huge casting furnaces here.

These finer alloys are ready to go to work on peacetime jobs. They await the day when they can bring a new conception of brass efficiency to new industrial applications. Bridgeport looks forward to making them available to carry out *your* toughest assignments.

"Bridgeport" BRIDGEPORT BRASS COMPANY
BRIDGEPORT, CONN. • EST. 1865

Hundreds of vitally essential war items such as the following are now being fabricated at Bridgeport:

- Artillery Cartridge Cases
- Small Arms Cups
- Primer Tubes
- Rotating Bands and Tubing
- Projectile Covers
- Gun Brush Couplings
- Decontaminator Shells
- Fuse Discs
- Mortar Discs
- Aircraft Instrument Parts
- Radio Condenser Cans
- Motor Generator Covers
- Flare Fuse Gaskets
- Fuse Rotors
- Depth Bomb Detonator Cases
- Motorcycle Pumps
- Fire Extinguisher Shells
- Truck Tire Valves
- Filter Bushings
- Primer Bodies
- Transmitting Tubes
- Oil Heating Control Parts for Aircraft
- Pistol and Booster Components
- Propeller Pitch Relay Tubes
- Filter Shells
- Flashlight Cases
- Electronic Copper Anodes
- Depth Bomb Cases
- Turnbuckle Tubing
- Primer Tubing
- Condenser Tubing
- Duplex Tubing

BRIDGEPORT ARMY E NAVY **BRASS**

THREADS THAT LIVES MAY HANG ON

When wars were fought at a slower pace, it is said that "for want of a nail" a shoe, a horse, a rider, a battle and finally a kingdom were lost.

Little things can be just as vital in the war today—things as humble, for example, as the nuts which hold fighting aircraft staunch and tight.

The lives of flying crews may hang on the threads of nuts which stay put—hold fast against the chatter of gunfire, the throb of pulsing engines, the wrack and twist and vibration of massive wings wheeling and twisting through thin air.

We make such a nut. We have made more than three billion of them. And as far as is known, not a single one of these nuts has ever failed in service.

It is the special virtue of Elastic Stop Nuts that they never loosen, slip, shake off or break.

Small wonder they are used on every airplane made in the United States and Canada — as many as 50,000 may be used in a single ship.

Some day these nuts will be available for purposes other than the grim jobs of war.

When they are, automobiles will be tighter and safer and quieter—everything from garden tools or farm tractors to radios and vacuum cleaners will give longer and less troublesome service.

But that's for the future. Today, all these tenacious nuts we can make go for an even more important purpose—which is the simple task of holding tight till the war is won.

ELASTIC STOP NUT CORPORATION OF AMERICA
UNION, NEW JERSEY

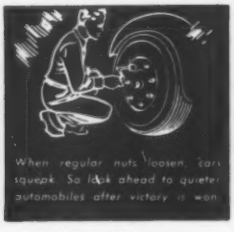
ELASTIC STOP NUTS

Lock fast to make things last

ESNA
TRADE MARK

Washing machines call for nut and bolt connections that stay tight under heavy use. Elastic Stop Nuts keep such appliances running right

Radio sets will last longer, keep a truer tone, with Elastic Stop Nuts holding important fastenings firm and right



When regular nuts loosen, cars squeak. So look ahead to quieter automobiles after victory is won

On a lawn mower, ordinary nuts may loosen, fall off, get lost in deep grass. Elastic Stop Nuts stay put

NEW PRODUCTS

Ready-Gummed Masking

Newest material for masking out areas which must be kept clean and free from pigment during the job of spray painting or lacquering is Ready-Gummed Masking Paper, developed by Adhere, Inc., 1220 Maple Ave., Los Angeles. The paper stock is light and tough,

treated to resist the solvents, oils, and other vehicles used in surface coatings. Only the edges of the paper are coated with pressure-sensitive adhesive and protected with narrow strips of fabric.

The masking can be applied by one man. He slips his left hand through a roll of it, reeling it off as needed, stripping the protective fabric, and pressing it in place with his right hand. It separates cleanly from surfaces to which it is applied. Since the adhesive stays on the paper, it can be used more than once. The product comes in 200-ft. rolls, 3 in. to 36 in. wide, with one or both edges gummed. Aircraft factories are already using large quantities, including special die-cut masks for spray-painting designs like the official white-star-on-blue insigne.

Dehydrated Sugar

Five years of research lie behind a new dehydrated cane sugar, tentatively named "Vital Sugar," developed by Dr. Royal Lee of the Lee Foundation for Nutritional Research and to be marketed by Vitamin Products Co., Milwaukee. It is said to contain "all the natural vitamins and minerals of the original sugar cane"—the vitamins being A, B-complex, C, and K; the minerals being about the same as those found in milk and in green leafy vegetables, but in greater concentration.

Stripped of technicalities, the manufacturing process behind the new product consists of: (1) expressing juice from the cane; (2) filtering; (3) sterilizing with a solvent which evaporates completely; (4) freezing the juice, which results in formation of ice crystals of practically pure water intermingled with a concentrated solution of sucrose, minerals, and so on (essentially the same process as the backwoods method of making applejack); (5) extracting concentrate by centrifuging; (6) adding a little grain extract (wheat, flax, barley) to render the final sugar less hydroscopic; (7) drying to crystal or powder form by standard equipment used in milk or egg drying.

End product is a cream-colored, sweet-tasting substance "differing from other sugar in that it has a tartness found in very sweet orange juice," to be used in candy, baked goods, beverages, and special diets. Lee reports that the yield of his new sugar from cane juice is about double that of standard refinery practice (there is no molasses as a byproduct) and that his process lends itself to the dehydration of orange, lemon, and lime juices.

Plastic Sponge

Several months ago, the B. F. Goodrich Co., Akron, Ohio, began to produce its new "Koroseal Sponge." Since the material is a thermoplastic and cannot be vulcanized like natural rubber,

brand new techniques had to be developed for its manufacture. Meanwhile, the armed services snapped up every available ounce of it for crash padding in tanks, helmets, and other military applications. Now, however, there is sufficient production to make some available for essential industrial purposes.

The basic material, Koroseal, is a plasticized polyvinyl chloride with high resistance to oils, greases, chemicals, moisture, and oxidation. Even in the sponge form, it will not support a flame, in fact is "self-extinguishing" after a Bunsen burner directly applied to it has been removed. It can be made in various densities and porosities.

High-Visibility Goggles

"Eye Savers" are new all-plastic industrial goggles manufactured by Watchemoket Optical Co., Providence, R. I. They promise to fit comfortably over any prescription spectacles used by

the wearer and weigh only 1¾ oz. They are said to be "the only design now authorized by WPB to use high-priority Plexiglas for lenses."

This lens material is the same methyl methacrylate plastic used in bomber

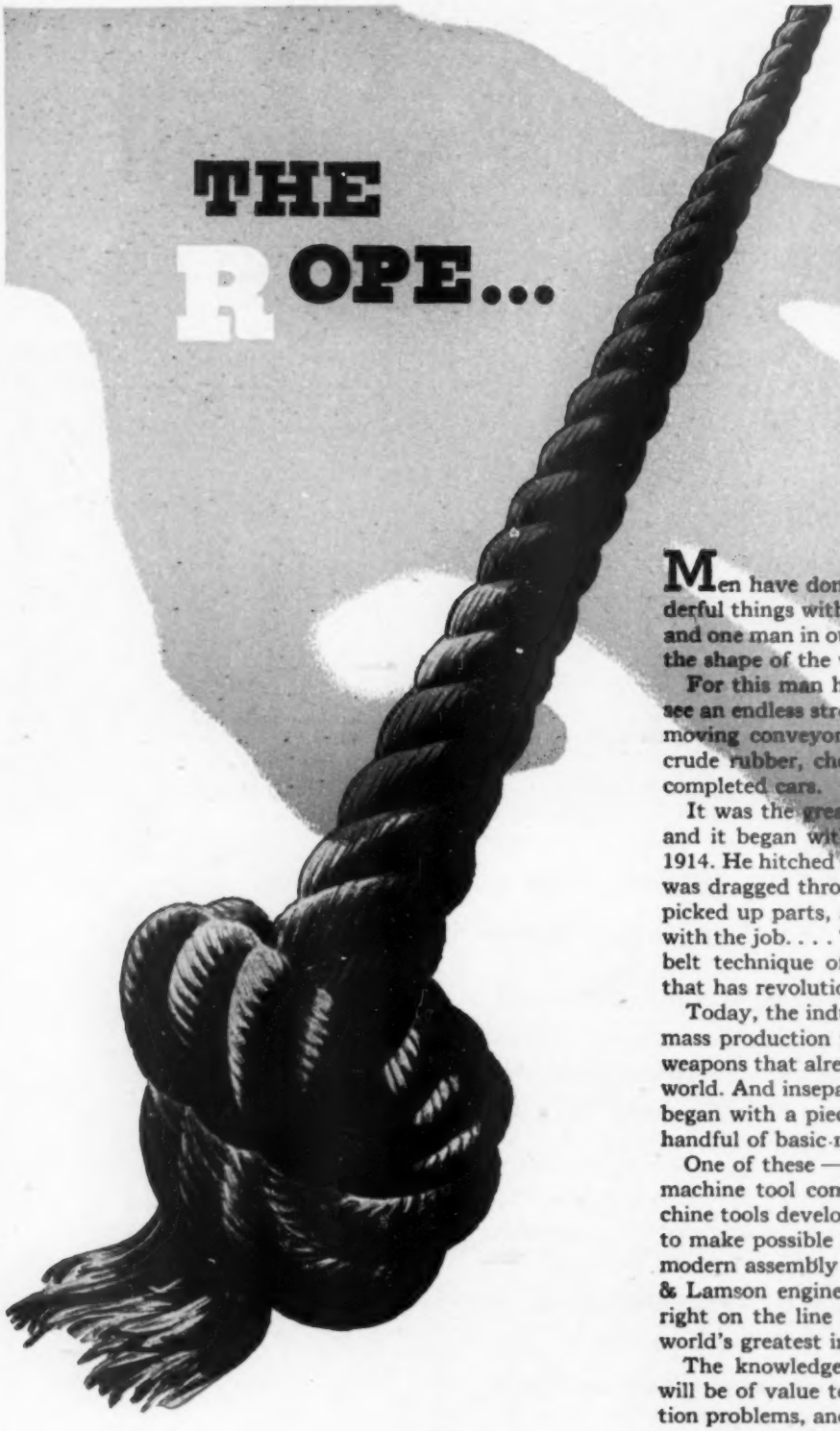
noses. It is more transparent than most glass and is highly resistant to shattering and splintering under impact. Lenses can be easily removed for cleaning and adjustment. Snap-in filters are available for protecting the eyes against the glare of torch-welding or flame-cutting.

New Products Briefs

Also reported this week, not only for their interest to certain designated business fields, but also for their possible import in the postwar planning of more or less allied fields and business in general, are the following:

• **Metalworking**—Wales-Strippit Corp., North Tonawanda, N. Y., is bringing out a new Wales Type CA Hole Punching Unit (in hole sizes up to 5/16 in.) with an inbuilt adjustable adapter. One or more units are slipped along the rail of a standard press brake to any hole spacing required for a particular punching job. If holes are to be staggered, each unit is adjustable up to 1½ in. fore and aft.

• **Coal**—Two new numbers are being added to its line of Coaladd Dustproofing Treatments by Johnson-March Corp., 52 Vanderbilt Ave., New York: Coaladd A for use on extremely porous midwestern coals, and Coaladd DCW for use on extremely wet coal or for coal destined for unduly cold climates. The former is a viscous liquid; the latter comes in dry granules; both are reported to form a plastic, insoluble film over the surface of coal pieces. This film promises to transfer its dust-killing effectiveness to other pieces so that when there is breakage during handling, the new surfaces are contacted and given a protective coating.



THE ROPE...

Men have done many strange, terrible and wonderful things with the simple tool known as rope — and one man in our time used a piece of it to change the shape of the world.

For this man had a vision. He thought he could see an endless stream of automobiles flowing from a moving conveyor belt — commencing as iron ore, crude rubber, chemicals and flax, and finishing as completed cars.

It was the greatest technical dream of our time, and it began with a crude experiment one day in 1914. He hitched a length of rope to a chassis which was dragged through the plant, while six workmen picked up parts, assembling them as they traveled with the job. . . . Thus was born the famous moving belt technique of assembly line mass production that has revolutionized American industry.

Today, the industry which gave us assembly line mass production is producing a major share of the weapons that already are changing the shape of the world. And inseparably a part of this drama, which began with a piece of rope, is the engineering of a handful of basic machine tool companies.

One of these — Jones & Lamson — is the oldest machine tool company in America. Precision machine tools developed by this company have helped to make possible every step in the development of modern assembly line technique. And today, Jones & Lamson engineers and service men are working right on the line in hundreds of plants, inside the world's greatest industry.

The knowledge and skill which this represents will be of value to you in meeting today's production problems, and in planning for tomorrow. They are yours for the asking now. Call upon us!

Universal Turret Lathes . Fay Automatic Lathes . Automatic Thread Grinders . Optical Comparators . Automatic Opening Threading Dies

JONES & LAMSON MACHINE CO., SPRINGFIELD, VERMONT, U.S.A.

Profit-producing Machine Tools

WAR BUSINESS CHECKLIST

A digest of new federal rules and regulations affecting priorities and allocations, price control, and transportation.

Synthetic Resins and Plastics

Methods of determining manufacturers' maximum prices have been established for 19 main classes of synthetic resins and plastic materials. Custom-made plastic parts or objects, ready-to-be-applied protective coatings, synthetic fibers and rubbers are excluded; also experimental products of which less than $2,500 worth has been sold. (Regulation 406.)

Rubber

To protect the supply of crude rubber, a new, comprehensive order has been issued by the Office of the Rubber Director, relaxing certain restrictions on the allocation and use of synthetic rubber, while placing the dwindling stock of natural crude rubber under stricter control. The new order supersedes nine previous ones: Supplementary Orders M-13, M-15-b, M-15-b-1, M-15-d, M-15-e, M-15-f, M-15-g, M-15-h, and General Preference Order M-46. However, restrictions on certain end products of rubber have been carried over from the superseded orders in simplified form. Distinctions are drawn between the availability of general purpose synthetics (Buna-S, butyl, and Neoprene), which will be handled in the same category as crude rubber and latex, and special purpose synthetics, which fall into the general synthetic group. (Order R-1.)

A reference publication entitled "Synthetic Rubber" (Circular No. 7242), covering the kinds of synthetic rubbers, their uses, manufacturers, raw materials, has been put out and may be obtained from the Bureau of Mines, Dept. of the Interior, Washington, D. C.

Rubber Footwear

Manufacturers' maximum prices for waterproof rubber footwear have been cut about 5% by a recent rollback to the Oct. 1-15, 1941, price levels, instead of the levels prevailing under the voluntary agreements of March, 1942, and MPR 132. This OPA action covers rubber items for use by miners, farmers, and fishermen. (Emergency Price Control Act of 1942, as amended, and Executive Orders 9250 and 9328.)

Refrigeration Machinery

Installations of refrigeration water-cooled condensing units below 3 hp. are permitted when such installations are to be made aboard ship, according to a WPB amendment that further restricts the manufacture of refrigeration condensing machinery and limits the amount of alloy steel and other metals that may be used in the production of such units. (Schedule II to Order L-126, as amended.)

Gasoline

As a further step in curtailing the use of gasoline in the eastern shortage area, the Office of Defense Transportation has prohibited the retail delivery of packages measuring less than 60 in. in combined length and girth, or weighing less than 5 lb. Milk, eggs, perishable bakery products, medical supplies, repair parts, laundry, and dry cleaning are among the commodities exempt from this rule. (Amendment 3, Revised, General Order 17.)

Bolts, Nuts, Screws, and Rivets

The Office of Price Administration has redefined types of bolts, nuts, screws, and rivets in an amendment that differentiates more sharply than before special machined-from-bar products (covered by MPR 147) from other screw machine products covered by MPR 136. Prices for machined-from-bar special bolts, nuts, screws, and rivets will no longer be based on the Oct. 1–15, 1941, period, but on the costs, plus the customary markup, prevailing on Mar. 31, 1942, which is the base date for screw machine products. Manufacturers are required to recompute maximum prices of all special products and to file data with OPA for every new higher price. The amendment revokes a section of the regulation that set maximum prices for special products for export, since such products are now controlled by the Second Revised Maximum Export Price Regulation. (Amendment 1, Regulation 147.)

Mechanics' Tools

To bring about a better distribution of wrenches, pliers, screw drivers, and other mechanics' hand service tools among consumers and prime procurement programs, an amended WPB order requires that from 20% to 25% of the monthly production of specified tools be set aside for commercial distributors, provided that the manufacturers have on hand that proportion of orders based upon PD-1X applications for priority assistance. If the proportion of priority applications is smaller, additional production will be delivered to other buyers, predominantly military. If PD-1X orders are less than 75% of the month's output, distributors will receive additional tools. Rating for orders on hand tools has been raised from A-9 to AA-4; neither retail dealers nor consumers need ratings in order to make purchases from tool stores, however. (Order E-6, as amended.)

Aircraft Veneers

Before deliveries are permitted on special lengths or widths of gum, poplar, and tupelo aircraft veneer that are not covered by MPR 338, the approval of OPA must be secured for prices. Requests for special prices may be addressed to the Lumber Branch, Office of Price Administration, Washington, and should contain a complete description of the veneer as well as the price proposed. (Amendment 1, Regulation 338.)

Brass Mill Products

A new regulation stabilizing distributors' maximum prices for brass mill products and services has been set up, at October, 1941, levels, by OPA action permitting the continuation of markups up to 3¢ a pound over mill prices existing at this time, on all items except pipe or water tube. Items covered by Revised Price Schedule 82 are not included under the new rule. (Regulation 408.)

Dairy Equipment

Since the peak of the milk production season is at hand, the War Food Administration has eliminated the requirement that manufacturers hold in reserve 10% of their production of milking machines, farm cream separators, and farm milk coolers, and has granted them permission to distribute 100% of their authorized production. (Amendment 2, Order 3.)

Chromium Metals

Ferrochromium and chromium metals have been removed from control by GMPR and have been placed under dollar-and-cents maximum prices, effective July 1. No essen-

Accurate Steel Treating Co.
Chicago, Ill.

Advance Stamping Co.
Detroit, Mich.

American Thread Co.
(Two plants)

Associated Spring Corp.
Chicago, Ill.

F. W. Berk & Co., Inc.
Wood Ridge, N. J.

Blaw-Knox Co.
Blawnox, Pa.

The Christensen Machine Co.
Salt Lake City, Utah

Felker Mfg. Co.
Torrance, Calif.

Fisher Governor Co.
Marshalltown, Iowa

A. C. Gilbert Co.
New Haven, Conn.

Graham Paige Motors Corp.
Detroit, Mich.

Hercules Powder Co.
Belvidere, N. J.

A. F. Jorss Iron Works, Inc.
Washington, D. C.

J. O. Mfg. Co.
South Gate, Calif.

J. A. Maurer, Inc.
New York, N. Y.

Pettibone Mulliken Corp.
Chicago, Ill.

Richards Brush Co.
Seattle, Wash.

Slumber Products Corp.
Memphis, Tenn.

Westinghouse Electric & Mfg. Co.
Newark, N. J.

(Names of winners of the Army-Navy and Maritime Commission awards for excellence in production announced prior to this new list will be found in previous issues of Business Week. *The nation's food processing plants are eligible for the Army-Navy Production award. Both War and Navy departments have authorized the Food Distribution Administration to nominate candidates to be considered for the honor by the Army and Navy boards for production awards.)*

tial change in price levels has been effected by this OPA regulation, which divides the country into three zones. (Regulation 407.)

Sodium Phosphates

On and after July 1, 1943, no producer may use any sodium phosphate for a purpose other than the manufacture of another sodium phosphate, except with specific authorization from WPB, and no producer or primary distributor may deliver sodium phosphate without like authorization. Deliveries up to 1,000 lb. a month may be made to any person without this restriction, however, or up to 10,000 lb. per month if an authorized certification of use has been received. (Order M-334.)

Woolen and Worsted Apparel

To allow for the expense involved in preshrinking, cutting, and packaging, special pricing methods have been established for sales of preshrunk woolen or worsted apparel fabrics in lengths of 30 yd. or less.

Methods for determining prices for new fabrics—those not delivered during the base period established by Regulation 163, or not comparable or similar to base period fabrics—are also provided. (Amendment 12, Regulation 163.)

Hosiery

Further elasticity in the ceiling prices on hosiery (BW—May22'43,p18) has been provided in an OPA action which establishes ceilings for women's silk combination hosiery that vary with costs based on the gage of the hose and supplants the flat retail ceiling of $1.00 for all types of stockings made of silk twisted with rayon or cotton yarns. The new prices range, at retail, from 79¢ for gages of 39 and lower to $1.25 for the finer gages of 51 and higher. Wholesale and manufacturers' prices have been set correspondingly.

At the same time, another OPA action places under GMPR silk and nylon hosiery of unusual lengths—over 45 in.—for sale to the theatrical and motion picture trade. (Amendment 2, Regulation 274—Women's Silk Hosiery; Amendment 2, Regulation 95—Women's Nylon Hosiery.)

War Housing

The War Production Board has delegated authority to the National Housing Agency to amend approvals, within limitations, of material and products to be used in war housing projects. This WPB directive also formalizes the agency's existing authority, as a claimant agency, to allot controlled materials and to issue preference ratings for material and products approved by WPB for use in each project. (Directive 24.)

New Products

Applications for authorization of a maximum price for new products, a revised formula for which was established by Amendment 54 of Section 1499.3 (b) of GMPR (BW–Jun.5'43,p40), may still, at the discretion of OPA's administrator, be processed under the former section. A new amendment to GMPR has been put into effect to take into account the time and effort expended by sellers in preparing their applications under the former section, and also in consideration of the fact that the new pricing formula may require entirely different data. (Amendment 55, GMPR.)


GRUEN TIME

War Production Goes Up

Two Gore Commissions

Three Gore Honor Army

Custom Fund Gets

V-MAIL'S NEWSREEL

To many a soldier overseas, a copy of his employer's house organ is almost as important as a letter from home. But mailing difficulties often make newspaper deliveries impossible. To solve that problem, Cincinnati's Gruen Watch Co. puts out a special edition that is flown to the fronts on microfilm in regular V-mail fashion.

Controlled Materials

The War Production Board has announced that preference ratings applied to orders for specified items, which were not filled by June 4, 1943, must be canceled if they are not in conformity with restrictions imposed on that date. The groups of items are specified in Lists A, B, and C of Priorities Regulation No. 3, as amended June 4, 1943.

Another recent direction from WPB states that a preference rating assigned with an advance allotment of controlled materials used on orders placed before May 16 does not have to be downrated even though the rating for a third quarter allotment may be lower. (Direction 14, CMP Regulation 1.)

A revised Official CMP Class B product list, including a Class A civilian-type end product list, has been issued to supersede the list published Dec. 21, 1942. Copies are available at the WPB field offices.

Further steps have been taken to simplify CMP procedure. Formerly, any person who applied for authority to begin construction or for priority assistance on Form PD-200, and whose application was approved, was required to file additional forms for controlled materials. When the new form, WPB-617, comes into use July 1, the filing of additional forms will not be necessary.

Aluminum

The maximum base price of secondary aluminum ingot has been reduced by 1¢ a pound to the present 14¢ level of primary

aluminum "pig," with which it has formerly had to compete. This OPA action was necessitated because WPB has experienced difficulty in allocating secondary aluminum ingot. (Regulation 2.)

Oils

Linseed and fish oils have been brought under control by WPB in an action that prohibits, with some major exceptions, crushers, processors, manufacturers, or wholesalers from delivering linseed oil or fish oil having a nonvolatile content of more than 70% of weight after July 1 and restricts the use of these oils to specified pounds per gallon of certain products. (Order M-332.)

Shoes

Provisions of Ration Order 17 have been broadened to permit shoe dealers—retailers and distributors—to apply for additional working reserves of ration currency, and to allow dealers to obtain temporary loans of ration currency, upon application to OPA district offices. This amendment replaces the order allowing a dealer a ration currency equal to 50% of his stock of rationed shoes as of Apr. 10, 1943 and provides adequate working reserves. (Amendment 23, Ration Order 17.)

Other Priority Actions

Restrictions on the transfer of automobile radios and automatic phonographs manufactured before Apr. 24, 1943, have been removed by an amendment of Order L-262; transfers of automatic phonographs continue to be governed by L-21. . . . The amendment to General Limitation Order L-165 prohibiting the manufacture of armored cable, as defined, has been revoked by WPB, and the original order, effective Sept. 30, 1942, has been reinstated without interruption. . . . Necessity for certification for the delivery of not more than ten tons of calcium carbide in any month has been eliminated by WPB through issuance of Preference Order M-190 as amended. . . . Because limitations as to the use of steel stitching wire used in binding printed and blank paper have been found impractical, Limitation Order L-291 controlling this product has been revoked.

Other Price Actions

A new method of computing the value of lumber by manufacturers who produce boxes from their own wood has been established by Amendment 3 to MPR 195, under which the manufacturer determines the value of lumber by deducting $2 per 1,000 b. ft. from the applicable ceiling price. . . . Ceilings for contract logging services—the top prices a contractor can charge for cutting logs, half logs, or cordwood from standing trees for the owner of the timber—have been transferred from GMPR and placed under MPR 165. . . . To encourage the sale of skim milk from farms for use in producing casein, producers' ceiling prices for industrial casein have been raised 3¢ a pound by Amendment 16, Regulation 289. . . . Prices for washed and unwashed X-ray and photographic film scrap used by manufacturers of novelties have been rolled back to price levels of Oct. 1–15, 1941, by Revised Regulation 171.

MARKETING

Ceiling-Price Gyps

Black market operators have plenty of tricks, and OPA isn't getting the cooperation needed to cope with them.

Congressional disapproval of OPA's request to double its present roster of 2,000 snoopers may be one of the biggest boosts the black market ever had. Experience in other nations has shown that only a steady barrage of publicity, coupled with the vigilance of paid policemen, can stamp out this kind of wartime lawlessness.

Yet Congress seems in no mood to supply either of these weapons (at a time when supplies of gasoline, red meats, and fresh fruits and vegetables are diminishing), and OPA is pretty glum about it.

• **No Big Syndicates**—Nobody can say for sure how big the black market really is or whether it is getting bigger or smaller. Best guess, however, is that the market has not yet reached disastrous proportions, and that it is still largely cyclical—that is, it rises and falls against the rise and fall in commodity supplies. The cyclical aspect is heartening. For if a genuine syndicate of the type described in Sunday feature stories were in existence, the market would be more steady. The syndicate would see to that in order to assure an even flow of gravy.

OPA defines a black market as consisting of (1) willful evasion of rationing regulations, (2) willful evasion of ceiling prices, or (3) both. So far, there have been observable black markets in every rationed commodity, plus a lot of unrationed ones, including hairpins. Of them all, the food black markets are far and away the worst and the hardest to keep under control.

• **Matter of Competition**—The big trouble in foods is that black markets are usually operated by regular merchants through regular channels of trade. Since prices are not under control at the farm level, maldistribution occurs at the very first stage of the normal distributive process. To get an edge on his competitors, one merchant will pay the farmer a price so high that ceilings later have to be evaded if the merchant expects to get a profit.

In order not to lose out in this shuffle, other merchants have to duplicate the high prices competitors pay farmers or perhaps even outbid them. Pretty soon ceilings are being broken right and left, and the black market is spreading through the entire trade structure.

• **Some Variations**—Typical situations look something like this:

(1) A country shipper has difficulty getting chickens at normal farm prices. He therefore boosts the price to the farmer for a couple of crates of poultry, and he can't resell the chickens at ceiling prices. So he labels the chickens as prize hens, intended for breeding purposes only, and sells them on a per-chicken (not per-pound) basis since OPA has no ceiling on breeding hens. By the time the alleged prize hens reach the retail market, the original price has been marked up who knows how many times, and the hens are probably also misgraded. As a final step in the transaction, the grocer saves the chickens for his special customers.

(2) A middleman has a car lot of precious potatoes but is afraid to sell them at over-the-ceiling prices. He is rescued by a group of grocers. They agree to buy not only the potatoes, but also a considerable quantity of carrots (supplies of which are plentiful). Meantime, the grocers thoughtfully remember that the middleman drinks Scotch and that his wife is partial to sheer stockings. Such "presents" soon appear at the wholesaler's home, with the consumer eventually footing the bill. (In one instance, the gag of giving presents was ingeniously varied by the staging of a dance for suppliers on Saturday night; every one of the suppliers won a handsome prize.)

(3) Still craftier, a frozen food locker operator starts a cooperative "farm" for his clients. A herd of cattle is acquired and fed on a common grazing lot, everybody sharing the expenses. Eventually, however, the "farmers" decide to slaughter their herd for personal consumption (which is perfectly legal and requires no ration points). So the lockers are filled with choice beef, and there has been no clear-cut violation of the law because ceilings, wherever they apply, have been observed.

• **Some Dramatics**—Of course, there have been some black markets of the movie villain type. Cattle rustlers on pinto ponies, trucks rumbling ominously through the night with loads of hijacked food, killing of stolen cattle by flashlight—all this has happened. But such blood-and-thunder tactics are too easy to patrol to amount to much. And anyhow, they have to be confined to nonperishable or semiperishable foods. There is no pig rustling, no hijacking of fresh fruits and vegetables.

All in all, a survey in the nation's major food centers shows that black-market operations follow a ten-fold pattern:

(1) Plain bootlegging or hijacking—that is, routing of foods through nonnormal chan-

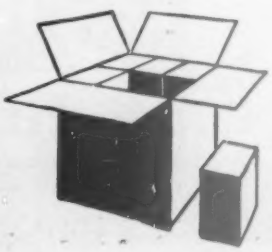
COCA-COLA COMEBACK

New Yorkers wondered at the loss of a famous landmark when the huge Coca-Cola sign disappeared from the north end of Times Square. Recently Coca-Cola came back—at the opposite end—with a large bulletin board that flashes the news in lights. The new sign replaces one operated by the New York Times, turned off because of the dimout. It runs only in daylight, flashing news summaries at 35 words a minute on a 40-ft. panel of bulbs. Under a three-year contract, the Blue Network's radio station, WJZ, provides Associated Press news, receiving in return a promotion plug after each summary. Using space and a tower structure already available, the board was built without critical materials or scarce equipment.

Carry your things, soldier?

10 to 12 tons of equipment and supplies must be moved to put one man into action — and keep him there. Supplying Allied fronts is the biggest packaging job of all time—and a great part of this military matériel today is shipped in paperboard cartons and shipping containers.

We've helped develop many of the thousands of specially designed packages that do this job . . . carrying parts between plants, carrying finished war products and foods to fighting fronts. Many are shown in our booklet, "Paperboard Goes to War," offered without cost.



CONTAINER CORPORATION OF AMERICA

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EVERYTHING PAPERBOARD FOR EVERYTHING PACKED

V-GARDEN SWAPPERS

Back-to-gardening in Los Angeles has reached the back-to-barter stage. The city playground department, following requests of gardeners, has started a Saturday morning barter market at Silver Lake Playground, and the number of people who have turned up, to trade carrots for cauliflower, spinach for turnips, lead to predictions that other markets will be established as the season advances.

Nothing is sold—all transactions must be swaps.

Production of Victory-garden stuff, including chickens and rabbits, has started Los Angeles people selling around the neighborhood, brought some complaints of competition from food markets.

nels so as to evade price and rationing rules.

(2) Use of tips and prizes.

(3) Combination purchases or combination sales.

(4) Classifying a commodity erroneously—that is, describing an ordinary hen as a prize chicken or potatoes intended for the table as seed potatoes.

(5) Classifying a purchaser erroneously—that is, labeling a locker holder as a cooperative farmer or a grocer as an institutional user.

(6) Short-weighting the purchaser, a very common practice.

(7) False declaration of stocks-on-hand (said to be common in the case of sugar and coffee among industrial and institutional users).

(8) Upgrading—that is, labeling a grade B product as grade A.

(9) Use of two sets of books to cover illegal sales.

(10) Purchase of unused ration stamps to increase inventories. (Some grocers are now buying expired stamps from consumers because the stamps are still good for inventory replacements.)

• **How Much to Ignore?**—So far as OPA is concerned, most of these tricks aren't worth policing if they only raise the price of food a penny or two, don't create a noticeable class of profiteers, or play havoc with the rationing system. OPA works on this theory:

(1) Nab the most flagrant cases when shortages occur for seasonal reasons, and thus scare the trade and consumers into good behavior.

(2) Keep an all-around eye on prices and rationing to the extent necessary to preserve public faith in rationing, price control, and equitable distribution of non-rationed commodities.

This theory is easier to put on paper, however, than to administer. To begin with, OPA has only 1,000 professional investigators assigned to the food trade—or about one investigator to every 500

merchants. Next, the "kitchen gestapo" which OPA had hoped would come to its help—namely, the embattled housewives—is so far a pretty scrawny army.

• **Lack of Cooperation**—To be sure, there is a place for consumer policemen on ration boards, but merchants squawk about it, and rubs often occur between the unions and such organizations as the Office of Civilian Defense (each of which has a candidate for the job). Finally, the courts still are very lenient with black market operators. It is often profitable for a black marketer to pay a low fine and repeat his transgression.

The ideal control situation would involve plenty of paid investigators; plenty of publicity, stiff fines, and prison sentences; and ability to control food prices at the primary—or country-shipper—level, either through the use of sufficient policemen or authority to buy a crop outright in the name of the government. Experience shows that once a commodity is put into distributive channels at a correct price, it probably will wind up in the consumers' hands at a fairly equitable level.

• **The Outlook**—In the absence of sufficient policemen and publicity, however, OPA's chances of really coping with the black market are pretty slim. Here is what apparently is in prospect:

Continued black markets in poultry.

Continued black markets in red meats, notably beef and veal.

Possibility of a fair-sized black market in fresh fruits and vegetables.

On the other hand, the new community-ceilings that OPA imposed a month ago are cleaning up petty price evasions better than expected and will be a big help in holding the price of staples.

Fresh, But Dry

That's the claim made for Marvels with the new wrapper, humectant, water-repellent paper, individual jackets.

The recent announcement by Stephano Bros. of a new humectant and wrapper on Marvels cigarettes—claimed to give them 26.4% longer freshness in dry climates—aroused interest in the industry. Since then, a two-fold improvement has been introduced which Stephano claims will extend the period of freshness and permit smoking under practically any conditions.

• **Troops Complained**—Cigarette formulas have been varied in the past to meet humid and arid conditions encountered in arctic and tropical climates, but with the U. S. Army Quartermaster Corps buying large quantities in advance without knowing their ultimate destination, tobacco companies

Facts about AVIATION NEWS and AIR TRANSPORT

★ ★ ★

Two new McGraw-Hill publications teamed with AVIATION to offer a complete information service to the $20,000,000,000 Aviation Industry

Why Two New AERONAUTICAL Publications Now?

To meet the rapidly increasing information needs of war and post-war aeronautical development. To fill the urgent need for basic and specialized information delivered swiftly to the men who are planning and building U. S. leadership in world aviation.

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A high-speed weekly magazine of aviation news interpretation and analysis. To bring aviation news, its meaning and its background to busy top executives. Timely. Accurate. Clear. Compact.

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AVIATION, with over 40,000 paid subscribers, will continue its outstanding service to all branches of the industry.

AIR TRANSPORT will serve the highly specialized needs of the air carrier, aiding and guiding *all* who are concerned with the progress of this fastest growing medium of passenger, freight, mail and express transportation.

Economies in paper usage which we have put into effect make it possible for us to render these additional services within our reduced paper quotas as established by the W. P. B.

AVIATION NEWS

OBJECTIVE—To bring interpretive journalism to aeronautical news presentation—at top speed—to the top men.

EDITED BY—Robert H. Wood, well-known aviation news analyst, will direct a seasoned editorial staff in Washington, D. C. Other editors and correspondents in key cities here and abroad.

CIRCULATION—10,000, by subscription only. SUBSCRIPTION—Charter rate, one year, $5; three years, $15. ADVERTISING—Page rate (on 13 time basis) $225. Closing date, 2 weeks prior to date of issue. SIZE—8⅛" x 11¼". Type page 7" x 10". STOCK—40 lb. SCREEN—100. FIRST ISSUE—August 2, 1943.

AIR TRANSPORT

OBJECTIVE—To serve the specialized needs and promote the sound development of war and post-war transport—reaching *all* concerned with the future of U. S. air commerce.

EDITED BY—Fowler W. Barker, long-time secretary of the Air Transport Association, will direct editorial staff headquarters at New York, assisted by editors and correspondents at key points.

CIRCULATION—10,000 by subscription only. SUBSCRIPTION—Special introductory charter rate, one year, $4; three years, $10. ADVERTISING—Page rate (on 12 page basis) $200. Closing date, 15th of month preceding month of issue. SIZE—8⅛" x 11¼". Type page 7" x 10". STOCK—40 lb. SCREEN—100. FIRST ISSUE—September, 1943.

McGRAW-HILL PUBLISHING COMPANY, INC. • 330 West 42nd Street • New York, N. Y.

...e at a disadvantage, and complaints ...ave filtered back from troops in vari...us parts of the world.

A picture in a magazine two months ...go showing a soldier on Guadalcanal ...ith a pack of droopy, damp cigarettes ...spurred Constantine Stephano, 40-year-...ld tobacco research expert, to make ...rther experiments. In a short time, ...e came up with an answer, and today ...is company is prepared to start mass ...roduction on cigarettes in individual ...cellophane wrappings and a special ...ater-repellent cigarette paper.

Smoke in the Rain—Resembling ordi...ary cigarette paper in appearance, the ...ew paper sheds water, is tasteless and ...dorless, resists perspiration, won't stick ...o the lips, won't absorb water from ...et fingers, and can be smoked in the ...ain, according to Stephano. The extra ...cellophane helps keep individual cigar...ettes fresh after the pack is opened.

Stephano is awaiting the go-ahead

FLEXIBLE WOODEN SOLES

One possible answer to growing leather shortages turned up last week in the shape of a new wooden shoe sole (above) that bends in every direction. Made of ¼-in. cherry or maple, the novel sole is cut across the grain for wearing qualities. Flexibility is achieved by plastically bonding the sole to soft leather and then dicing it into a criss-cross tread. Already in production under patents issued E. P. Reed & Co., Rochester, N. Y., the new shoes are slated for early fall markets under the trade name Timber-Toppers. Claiming the new sole gives greater comfort, wear, and waterproofing than all-leather footwear, the company aims to make this wartime shoe a postwar item.

from Washington on what the company has christened the combat pack. All output for the duration will go to the armed forces, but Stephano is enthusiastic over its postwar possibilities.

Without slowing up production, machine Stephano devised adds the individual cellophane wrapper. Its cost will not affect consumer price materially. Marvels now sell 3¢ under the popular-priced group. Their annual output totals 5,000,000. Stephano says this puts them in seventh place on the list of all brands.

• **Replaces Glycerin**—The humectant is Stephano's secret. He hasn't patented it. He says his glycerin replacement is a derivative of an organic material always used in cigarettes, and it is priority-free. He discovered it through a chemical breakdown and then made certain changes. Stephano feels it is so good that he doesn't care if glycerin never comes back.

The other development is a laminated thermoplastic wrapper made especially for Stephano by another company. Stephano says it is only a shade less effective than foil in reducing water vapor transmission.

• **Three Packages**—Three different packages of Marvels are being manufactured now. The first is the domestic pack, using the humectant and the thermoplastic wrapping paper. These are claimed to be 25% slower drying in 24 hours, 58% slower in 12 hours, and 100% slower in 6 hours in summer months; winter figures are comparable. The second pack, known as the military, employs the water-repellent cigarette paper in addition. The individual cellophane jacket is added to the third, or combat pack.

Stephano is reluctant to make claims until his cigarettes are tested under actual conditions. An illustration of this has been his handling of the new humectant which he developed some time ago in anticipation of a glycerin shortage. He was putting it into Marvels a year before Pearl Harbor, sending them to different localities to check results. He says he received no complaint.

MORE ABOUT LISTENERS

Beginning next month, subscribers to the radio program rating service furnished by the market research firm of C. E. Hopper, Inc., will get a bonus in the form of additional information about their programs' pulling power.

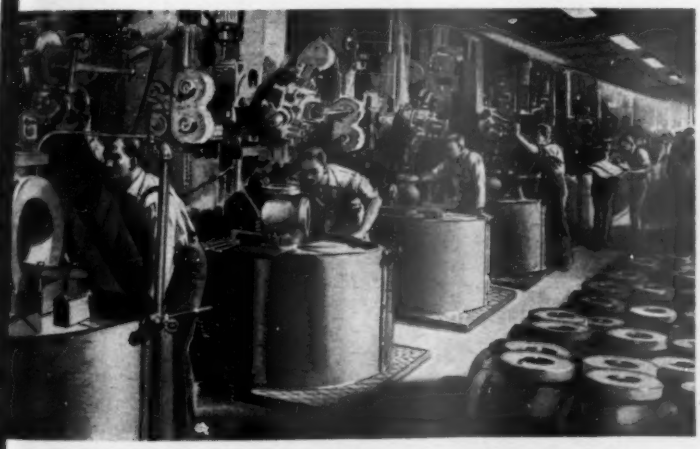
Henceforth, Hooper will report on the composition (number of men, women, and children) as well as on the size of individual subscribers' audiences. Additionally, Hooper will report on the average number of minutes of radio listening during each hour of the day and on the popularity ratings of programs broadcast in the early morning and late evening. These refinements

HERE NIGHT LIGHTS BURN VALVES ARE ON THE JOB

IN plants large and small all over this country, the lights are burning every night to make the products of Victory. And wherever lights are burning, valves are operating—in a large majority of cases Crane Valves. Valves controlling the power surging from boilers—valves saying "stop and go" to oil, gas, water and air—valves playing an important part in controlling the flow on process lines—valves and more valves that are vital to production.

America needs valves in amazing quantities—needs the right kind of valves and needs them in a hurry. It is the control of the engineering back of these valves, control in the laboratories, control of every step in their production from the raw material to the finished product—control in their distribution and control of their final application of the right valve to the right job that has made Crane flow control so important to America at war. Flow control promises new and better service to American industry when the war ends.

CRANE CO., 836 So. Michigan Ave., Chicago, Illinois



The manufacturing facilities at the Crane Chicago Works are today devoted exclusively to producing valves for Navy, the Army and war industries. When the war is won and American Manufacturers turn to peacetime production the tremendous capacity of Crane Chicago Works will again be devoted to producing valves for you. Industry may expect in the future, as in the past the same exacting standards of quality that have characterized Crane products for more than 88 years.

At every step in its manufacture every Crane Valve is checked and re-checked to safeguard the quality that the name Crane stands for. Shown above is a final inspection, under pressure.

ARMY E NAVY

CRANE VALVES

will be carried out by means of Hoo er's established telephone survey te nique.

Advertisers who want a more detail breakdown may subscribe to a spec service (already tested on three Hoop clients). This will give such extras program performance on individual st tions, and how well a program is doi in comparison with its past record an in comparison with competitors.

Hooper has plans for still broad service. Notably, within the year, th firm expects to introduce a unifor station coverage audit. Claim for th station coverage audit is that it will n favor any particular type or size of st tion, and that it will apply the same r porting techniques to all localities. Wit the addition of this service, Hooper w have rounded out what it calls its "fiv year plan" of radio research.

Bottoms Up

And that's the way many of them will stay as spread of liquor rationing foreshadows a longer time between drinks.

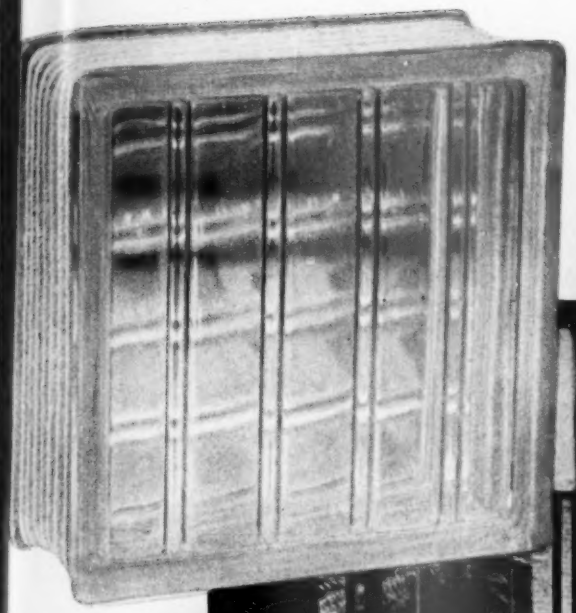
Dwindling supplies of hard liquor and mounting demands for rationing have provoked serious buying sprees in many states. Where rationing by cards has been put into effect, registration offices have been swamped by applicants.

• **OPA Book Punched**—In Michigan 1,100,000 persons registered for ration books, and rationing had to be post poned to take care of additional ap plicants who are expected to add 100,000 to the total. Rationing is now scheduled for an unspecified July date with one quart each four weeks as the expected allowance.

Each applicant has been required to bring his OPA ration book No. 2 which is punched in one corner (with the per mission of Washington) so that nobody can obtain more than one liquor book. A 25¢ charge has been made to cover the cost of issuance of the state books. In the meantime, the demand for liquor at state stores has been so heavy that informal rationing had to be put into effect to conserve supplies.

There is a wide divergence of opinion as to the amount of hard liquor deemed necessary for wartime consumption. In New Hampshire, the consumer is limited to two quarts daily. Across the line in Vermont, the rule is two bottles daily. In Alabama, it is one quart per purchase.

• **Cut to Pint a Week**—In some states, there is a tendency toward stabilizing matters around one pint per drinker per week. Washington and Oregon formerly allowed one quart per week but have cut to one pint. This is the amount allowed



Glass can *package* Better Living

Just ten years ago, Owens-Illinois introduced a new form of glass—INSULUX Glass Block.†

Today you notice this distinctive material in structures of all kinds—homes, schools, hospitals, stores and factories. INSULUX offers two prime advantages: it transmits daylight yet has insulation value equal to an 8-inch brick wall. INSULUX Glass Block will be used even more in buildings of the future . . . help make them better "packages" for living.

Other forms of glass, too, have important roles in our future. Duraglas containers—lightweight, strong and economical—also will contribute to better living . . . will package an ever-increasing variety of products for your convenience and satisfaction.

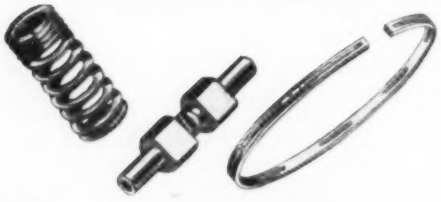
Owens-Illinois Glass Company, Toledo.

†*A Trademark of Owens-Illinois Glass Company*

OWENS-ILLINOIS

Owens-Illinois Glass Company — Owens-Illinois Pacific Coast Company — Libbey Glass Company

Variety is the spice of our life, too!



McQUAY-NORRIS specializes in versatility . . . making many different products well. Thirty-three years ago we introduced the first replacement piston rings. Now we are making millions of precision parts in great variety to help beat the Axis . . . parts sturdy and unfailing. We are direct contractors to the Army and Navy and sub-contractors on precision parts for aircraft, tanks, scout cars and trucks. In our business, we've just *got* to be versatile.

Today we are working in five critical metals . . . iron, steel, aluminum, bronze, magnesium. We make parts large and small . . . parts hardened and ground . . . parts not hardened and ground. We build and operate highly specialized machinery. In our expanded plants, we employ thousands of expert craftsmen.

This versatility is all part of the job . . . part of the business of getting on with the war . . . part of the business of keeping ready for peace.

McQUAY-NORRIS MFG. CO.

TIME TESTED McQUAY NORRIS AUTO PARTS PROVEN IN SERVICE

ST. LOUIS, MO. ○•○ TORONTO, ONT.

PRECISION WORKERS IN IRON, STEEL, ALUMINUM, BRONZE, MAGNESIUM

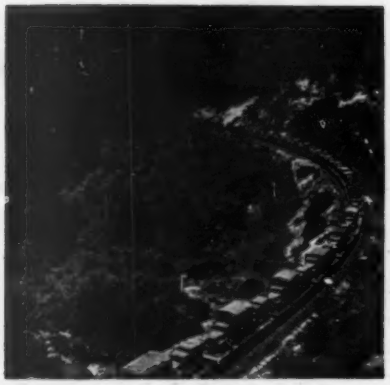
LAUNDRY BLUES

Perched amid a backlog of 6,000 bundles of wash, Richard Van Beek, vice-president of Chicago's big Monarch Laundry, mirrors the frustration of fellow operators plagued by too much business and vanishing help. With business 50% above normal, Chicago's laundries this week eyed plans of operators in other cities—elimination of fancy services, a weekly quota of three shirts per customer. Swapping customers to avoid cross-town hauls helped a little. But work that once took one to four days now needs ten days to three weeks, so customers who can't wait that long are hanging out their own (below), drubbed in washstand or sink.

by Montana, North Carolina, and Virginia. A quart a week is the rule in Utah, Idaho, and Iowa.

Highball hoisters are much worse off in Ohio where the allowance will be one quart every four weeks. State stores there were closed two weeks to register applicants for cards. As in other states, authorities are concerned over the lending and selling of books. Virginia will prosecute persons trafficking in the permits. North Carolina has announced that the present books will be called in and replaced by a new type less adaptable to monkey business.

• **West Virginia Plan**—West Virginia will inaugurate a ration plan Aug. 6. It is expected that it will allow one bottle a week. Pennsylvania is in the throes of decision. A committee has been appointed to report on a plan. It is expected that 2,500,000 to 4,000,000 Pennsylvanians will have to register if rationing is adopted.



1. This picture of a Southern Pacific railroad train, its flat cars loaded with army trucks, was one of many taken by LIFE Photographer *Peter Stackpole* to show LIFE readers the job the railroads are doing in wartime. Readers were taken into troop trains, signal towers, repair shops, were shown how America's railroads are efficiently handling the toughest job in their history.

2. In this picture, LIFE Photographer *Herbert Gehr* portrays a typical Ration Board. The faces of its members indicate that they are friendly but firm, and are intent only on giving everyone a square deal. They are the Ration Board at Bristol, Connecticut, and like all members of the 5500 other local boards in the U.S., are doing a tough job for which they get no pay. LIFE's story accompanying Gehr's picture showed the 23,000,000 Americans who read LIFE each week that success of wartime rationing depends on the decisions of boards like this, and that on the whole, local ration boards all over America are doing a good job under trying circumstances. The Bristol Board reports that gasoline and fuel oil give them the most headaches. They worked out their own effective plan for car-pooling by defense workers.

Americans see themselves at war

3. Most Americans have never been in North Dakota, but in pictures like this, LIFE Photographer *Eric Schaal* took LIFE readers on a tour of that horizonless state where crops are planted by the quarter section and farms average 463 acres. Scale of farm operations is indicated in this photo of a sugar-beet drill planting six rows at once. Picture was one of many illustrating LIFE article on spring planting in the U. S.

4. "Boomtown," formerly known as Washington, D.C., is "busting right out of its pants" according to LIFE Photographer *John Phillips*, who showed LIFE readers pictures to prove his contention. Sidewalks, restaurants, movies, hotels, buses, and everything else in Boomtown were revealed as hopelessly overcrowded. Phillips' portrayal of wartime life in Washington made readers thankful they live elsewhere.

5. All over war-hurried U. S. fires increase in everything from oil refineries to magnesium plants. LIFE Photographer *Gijon Mili* showed how fires start, how science devises ways to fight them. Here Professor A. R. Davis of M.I.T. demonstrates that anything burns by blowing corn meal into a flame. Mili's pictures helped readers to understand why fire control was never more important in America than it is today.

6. The poignant spectacle of soldiers saying good-by to families may be commonplace, but always dramatic. LIFE Photographer *Alfred Eisenstaedt* took LIFE readers into New York's Pennsylvania Station, jammed with service men. Here, he caught a soldier spending last few minutes with wife and baby, a scene that is the same in Penn. Station or at a tank-town depot.

7. Speaking of crowds, the railroads have more than their share, as LIFE Photographer *Ed Clark* showed in a series of pictures revealing crowded, uncomfortable travel conditions. The article urged people to stay home, to avoid travelling unless on war or business bound, showed why trains are overcrowded, pointed out that at least 35% of today's travel is unnecessary.

8. Not all is war and work in America today, as this picture by LIFE Photographer *Walter Sanders* shows. Sanders was one of many LIFE cameramen who scattered all over America to film a wartime Sunday. They found Americans setting aside the day of rest to drop back into normal activities. This photo shows youngsters singing hymns in a church near Plymouth, Mich.

Because Americans today have an ever-growing stake and interest in what is going on here in the U.S., LIFE's home-front photographers are helping them see themselves at war.

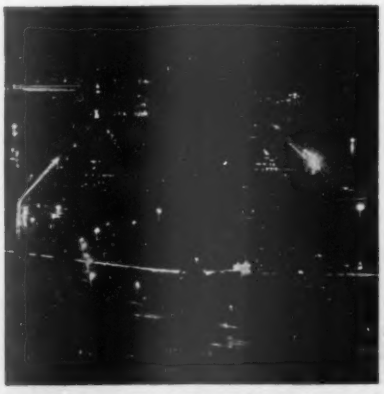
Eleven of these photographers are pictured on this page together with examples of their work.

Each week some 23 million people find their desire to learn about home-front happenings really satisfied on LIFE's pages. Each week they gain new understanding . . . new appreciation of America at war through the clear, revealing stories in LIFE.

Readers are able to see each subject in a vital, vigorous, and realistic light, and to get the proper perspective of the wartime doings of Americans in every nook and cranny of the Union through the efforts of LIFE's editors, writers, and home-front photographers like those shown here.

LIFE

9. LIFE Photographer *Marie Hansen* recently conducted LIFE readers on an inspection of the WAAC training center at Fort Des Moines, showed in photos like this one how America's first women soldiers train, how they live, and how the jobs they are being taught vary from meat inspection, driving trucks, Post Exchange and office work, to teaching. LIFE readers learned that girls make smart and willing soldiers.



10. All Americans know the vital importance to war of metals, but not many have seen ore mines in operation. Down into the pits and shafts went LIFE readers recently with LIFE Photographer *Charles Steinheimer*, whose pictures detailed miners at work, using drag buckets, bringing ore cars to the docks. Above shows ore docks at Duluth, Minn. Docks are built high above ships so ore will slide easily into holds.

11. The 23,000,000 Americans who read LIFE each week came home recently with North Dakota men of the 164th Infantry, fresh from fighting on Guadalcanal. LIFE Photographer *Otto Hagel* showed what it is like for a soldier to see relatives again, go out with girls, and tell grieving parents all they know of a buddy's death. Here one soldier tries to comfort a mother by telling her how her son met death bravely.

Mail-Order Books

Sears collaborates with Simon & Schuster to market best-sellers at $1.66; selections to be made by Gallup poll.

Sears, Roebuck & Co. is saying little about coming events lest it take the edge off tidings in the July catalog. Consequently, details of the People's Book Club—the project which Sears has evolved with Simon & Schuster, publishers, and the Consolidated Book Publishers of Chicago, printers, for the mass merchandising of literature—were being kept carefully under cover.

• **By Gallup Poll**—Naturally any mail-order book club would not cater exclusively to men and women of letters. Backers of the new club have gone all the way in democratic control. Selections will be made not by a panel of editors, novelists, and critics like that which prescribes the literary diet for The Book-of-the-Month Club, but through a Gallup poll.

This continuing survey to determine the people's choice will be fashioned into a consumer jury system under which the readers themselves will have the vote in ultimate selection—a plan that has obvious sales promotion possibilities, as it provides another reason for becoming a book club member.

• **Books of All Publishers**—Selections will include books of all publishers, reprints of which will be priced uniformly at $1.66 each. Presumably, Simon & Schuster will negotiate with other publishers for the reprint privileges, buy the books from the printer, and sell them to Sears for its club members. Breaking the ice are "The Robe" by Lloyd Douglas (Houghton Mifflin) and Marcia Davenport's "Valley of Decision" (Scribner's.) Purchase of four volumes a year constitutes membership and eligibilty for election to the jury responsible for selecting the club's books.

Whatever satisfaction Sears may find in contributing to the national culture, it has more material interests in adding to a line which can be manufactured without any material more critical than paper, and with an assurance of more than usual wartime uniformity of distribution (BW—Sep.26'42,p55).

• **More Books Than Ever**—Book publishers generally are limited to 90% of last year's paper consumption but are stretching supplies so successfully by using lighter stock, narrower margins, and less space between printed lines, that more books are coming off the nation's presses than ever before. Other curtailments are not too serious. Copper and zinc restrictions will limit illustrations, but those that survive will be colorful, for ink manufacturers have developed

substitutes for most limited pigments. Most severe shortages in bindings are the de luxe bindings like cattle hide and sheepskins. Osnaburg is being used for sandbags and burlap substitute, and buckram for Army tenting. But these problems aren't likely to plague Sears; they confront the de luxe producer.

LESS MILK FOR BREAD

The staff of life may take on a little different character in content (not noticeable to the housewife) due to the War Food Administration's amendments to Food Distribution Order No. 1. The amendments, effective July 1, remove the minimum of 3% milk solids but the maximum of 4% remains. This action was necessitated by milk shortage and by WFA's order to spray and roller type milk manufacturers to set aside 75% of June-July milk production for government withdrawal.

In recognition of the necessity of keeping up the nutritional value of bread, WFA has raised the maximum of fat for bread from 2% to 3%, and the maximum of sugar from 4% to 6%, which in effect will give a loaf of approximately the same nutritional value as under the old standards. Food & Drug Administration has also proposed new enrichment standards for bread and flour, increasing the minimums on thiamine, niacin, and iron, making riboflavin a requirement, and leaving calcium as an optional ingredient.

Other amendments to the order make the grocer as well as the baker liable for any violation of that section which bans consignment selling.

Because new electrical appliances cannot be had for some time, the trade is campaigning to corral used equipment for resale. Proctor Electric's nation-wide plan is typical. Owners are paid in war stamps for appliances which are repaired and resold—bearing special tags that certify serviceable conditions.

Japan Develops a "Ruhr"

Industries in Manchukuo have been developed through the 1937-41 five-year plan and now 1942-46, but war has retarded equipment shipments and labor is unproductive.

Manchukuo is Japan's industrial ace-in-the-hole. After seven years of intensive industrial expansion—with the major emphasis on war industries—the puppet empire figures in Japanese plans as an untapped reserve to be called upon in an emergency. Now that the cry of crisis is again being heard from Japan, Manchurian and other mainland war industries assume an added war importance.

• **Storm Signals**—Japan is now on the defensive. Allied arms tighten the noose around her new empire, nibbling at islands, threatening to overflow into Burma, backing China's war effort with gradually increasing supplies, and clipping off Japan's grip on the Aleutians.

Japan knows that the raiders will return to Tokyo one day, but that the next time will be different. The aim will then be destruction and not intelligence photographs. And the raids will not come again until they can be maintained day after day.

• **Decentralization**—To meet this inevitable contingency, Japan has been decentralizing home production along British lines—establishing new industries away from crowded cities, distributing component production throughout the islands.

In addition, Japan has hastened expansion of Manchurian industry—upgrading objectives and speeding construction projects. Manchukuo is protected from bombing by the deep penetration of North China, and the output of Manchurian plants moves by rail to the Chinese front and to Chinese coastal cities for shipment to the South Pacific.

• **Plus Inflation**—Industrial expansion in Manchukuo has paralleled that of Japan. The gross value of Japanese production has leaped from about $1,500,000,000 in 1929 to around $6,000,000,000 to $7,000,000,000 in 1941—discounting for serious price inflations which boosted nominal output in that year to around $9,000,000,000.

Manchurian production is claimed by Japanese industrialists to be approximately one-third that of Japan, but more cautious estimates place it far lower.

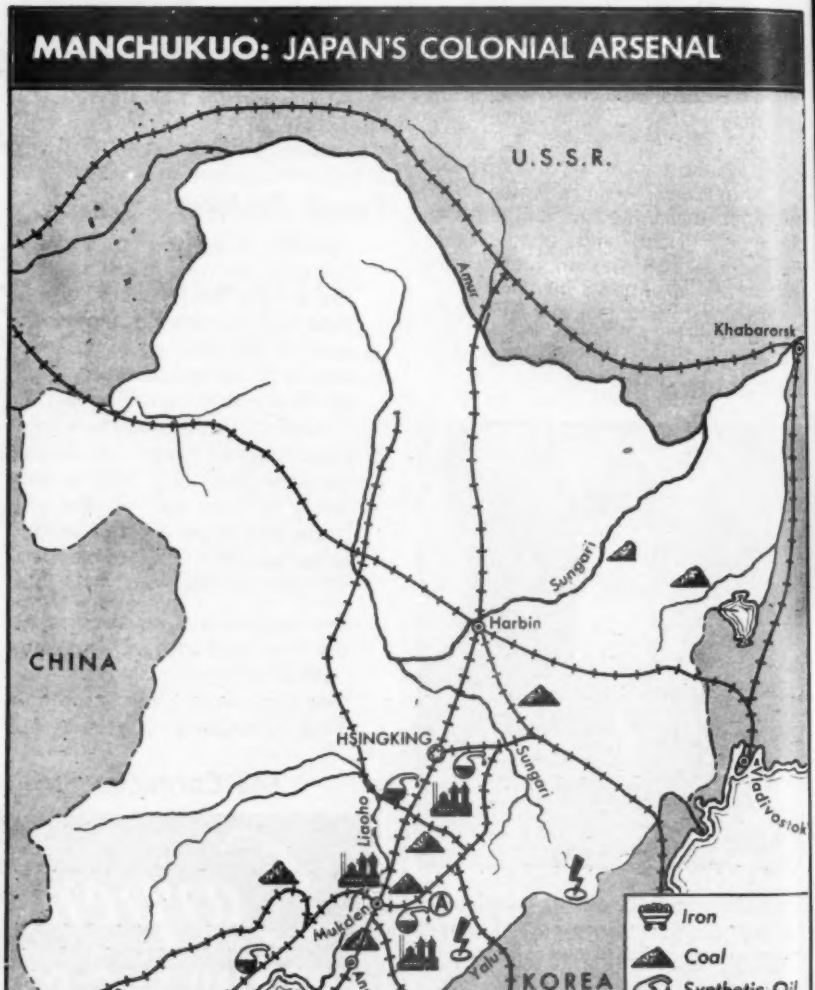
Conceived as a necessary accompaniment to the prosecution of the "China Incident," the five-year industrialization program for Manchukuo (1937–41) was revised upward twice before its completion. Financial appropriations for the first plan were boosted from $560,000,000 to $1,500,000,000 (all conversions are made at the rate 1 yen = $0.25). A second five-year program is now in progress.

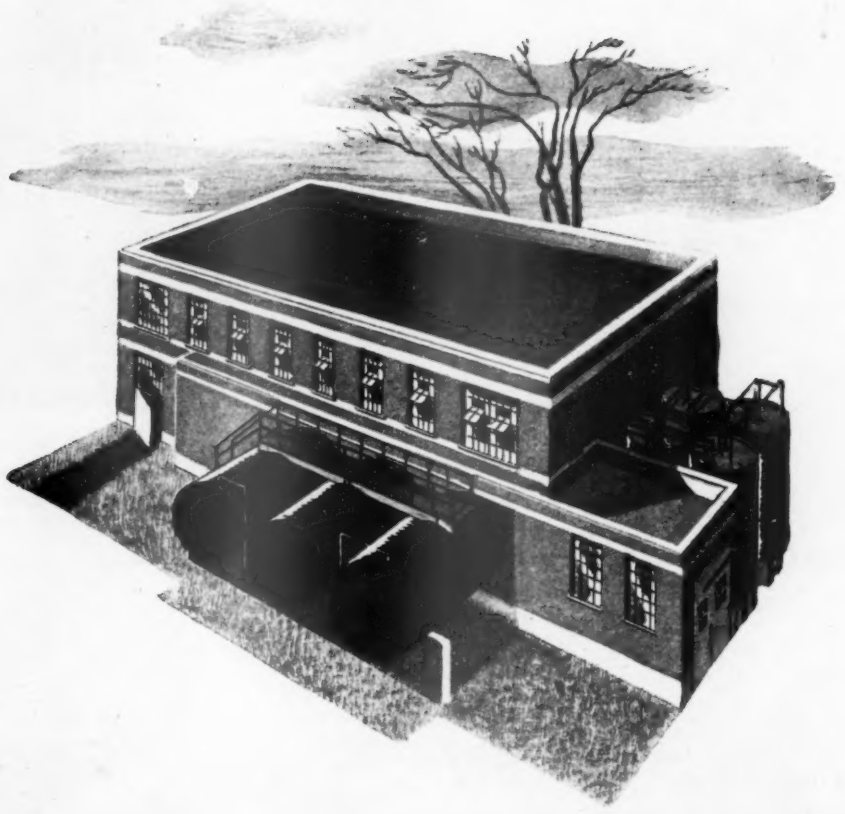
• **Typical Increases**—According to sources trusted by American experts, production in major lines during the five-year plan expanded as follows:

	Production ('000 tons)	
	1937	1941
Pig iron	633	1,380
Steel	344	730
Rolled steel	135	356
Iron ore	1,904	3,500
Coal	13,780	24,500

The key to Japan's industrial potential, and to the future importance of Manchurian industry, is manpower. This may be difficult for Americans to conceive in a nation that boasts a population (including 1941 colonies) of 100,000,000. The anomaly is explained by the incredibly low productivity per worker.

• **Labor Contrasts**—For example, per-man production in Manchurian coal mines is 0.2 tons per day. In Japan, it is only twice as great. This means, simply, that Manchukuo's 24,500,000-ton-per-





First Synthetic Rubber Plant

in the British Empire

JUST a few days ago this compact plant in Canada started production of Thiokol* synthetic rubber . . . man-made rubber that will increase our own synthetic stockpile and will be a direct help to the United Nations in their fight for victory.

We of the Thiokol Corporation want to congratulate Naugatuck Chemicals Ltd. of Canada — wish them every success. We are proud that our synthetic was the one chosen to be the first ever produced in the British Empire.

In this country Thiokol synthetic rubber has found scores of important uses. Among these are collapsible Mareng containers for storing and transporting gasoline and oil . . . lining for underground fuel vaults . . . corrosion-proof coatings for naval vessels . . . fuel hose of every description . . . gasoline-, oil-, and solvent-proof putties, adhesives and cements . . . diaphragms, packings and gaskets.

We hope these applications will not only stand as examples of Thiokol's versatility, but will also spur our Canadian associate to develop additional war and peacetime applications of this remarkable synthetic.

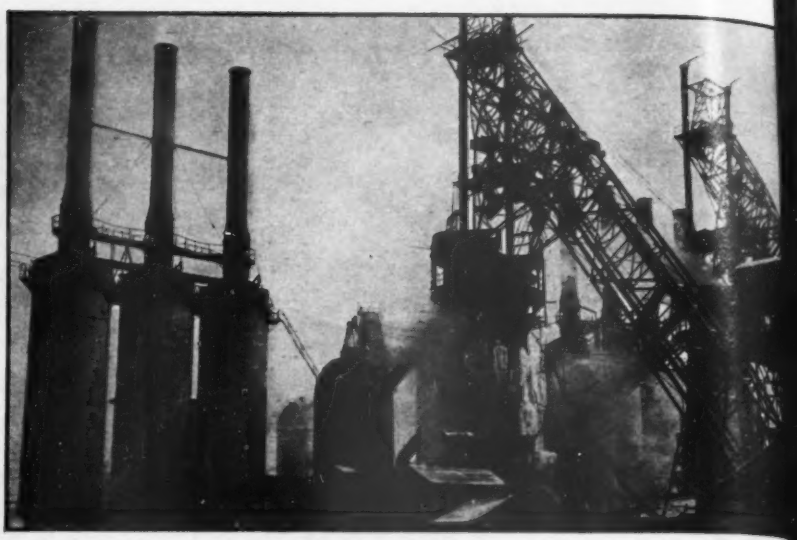
Thiokol Corporation, Trenton, N. J.

*Thiokol Corporation Trademark, Reg. U. S. Pat. Off.

Thiokol*

SYNTHETIC RUBBER

"America's First"



Manchukuo's Penhsihu Steel Works was scheduled for 2,000,000-ton capacity, but severing of sea lanes to Europe, where German plants were building furnaces for Japan, stunted the program's growth. American firms built the furnace shown above and drew blueprints for the mill's expansion.

year coal output required employment of about 500,000 miners—more than are now employed in the U. S. for the production of 600,000,000 tons.

Unhappy as this circumstance may now be, both in Japan and in Manchukuo, it has an interesting balancing feature in the form of a sizable bloc of unused colonial industry capacity.

Thus the Showa steel works at Anshan (map, page 88), despite failure to receive equipment from Europe after the outbreak of war, reached 1,700,000-ton capacity late in 1941 but failed to utilize that capacity for two reasons—lack of labor and shortage of coke.

● **Labor, Equipment Short**—At Penhsihu, near Anshan, the goal of pig iron production at 2,000,000 tons was never reached, and output now is far below rated capacity, because 60% of workers stay less than six months, and only 60% of equipment ordered abroad and 30% ordered from Japan arrived.

Two other blast furnaces in Japan's miniature Ruhr, added in 1942, have been operating below capacity because of fuel and labor shortages. Labor difficulties beset Chinese and Manchurian coal mines. New coal fields and iron deposits were tapped during the five-year plan, but in each case, development and output lagged for workers could not be found in sufficient numbers.

● **Lots of Unmanned Plants**—Throughout Manchukuo, between 1937 and 1941, power stations, aluminum factories, new coal mines, iron mines, steel and iron works, armament and machinery plants, railroad works, and light manufacturing plants appeared. For only a few were sufficient workers found, although all contributed to Manchukuo's ascending production curve.

This evidence of unused capacity ought to suggest caution in accepting persistent rumors of an imminent Japanese collapse. And it should be remembered that, when Japan's industry is finally reached by Allied bombers, displaced workers can be shifted to Manchukuo to bring these plants to peak production.

● **Threats of Rebellion**—However, not all war planning is mechanical, nor is production proportionate to plant capacity, resources, and manpower. In Japan's empire, colonial enterprises are operated under constant threat of insurrection and are frequently disrupted by guerrillas—totaling close to 1,000,000 in Manchukuo—who have never been suppressed.

In Korea, substantial Japanese garrisons enforce "thought control" and maintain concentration camps for rebellious natives. More than 1,000,000 political refugees have fled from Korea and China to Manchukuo where regular Japanese army units hunt them constantly. Across the Manchukuo border, in Soviet Asia, 200,000 Korean soldiers have been trained and armed by the Russians. And Koreans promise that when the going gets tough, the 300,000 persons who were taken to Japan will rise and disrupt the industries in which they work.

Whichever way the military leaders of Japan turn, they face either increased Allied striking forces moving over to the offensive or restless masses of colonial peoples resisting their control.

So far, Japan's Co-Prosperity Sphere has not proved an attractive place for Japanese colonists, and even "thought control" has not convinced the conquered people of Japanese superiority.

DOWNED! BY THE 17,901st?

GUNS BLAZE in the dark sky. That boy up there trusts his own skill and courage—and the many thousands of metal parts that keep his plane strong and flying against heaviest odds.

What if some tiny part *we* helped to make turns traitor in mid-battle?

If we could only see those tracer bullets sow red death across the cockpit, feel with him his sharp and lonely peril in the sky . . .

We'd say, "Our pay is still the comfort of our homes; his pay hot lead, night battles, chance of flaming death."

We'd say, "If we don't give the best we've got, our smallest failure is a crime against the life he scarcely lived and gladly risked for us."

And so we pledge: to make each metal part that keeps him fighting *true* to the minutest fraction; to conserve our metal; to work with our best skill; to think with precision; and so keep faith with those who do our fighting.

In this spirit, we at R B & W pledge ourselves to strength and accuracy in the millions of Empire bolts and nuts that we are making to hold American war equipment together. To R B & W's special manufacturing processes, developed through the years, we add the personal energy and care that forms an essential part of R B & W's contribution to Victory.

Reproductions of this ad re-arranged with a slogan for your War Production Drive, are free, upon request. Write Russell, Burdsall & Ward Bolt and Nut Company, Port Chester, N. Y.

RB&W *Making strong the things that make America strong*

RUSSELL, BURDSALL & WARD BOLT AND NUT COMPANY

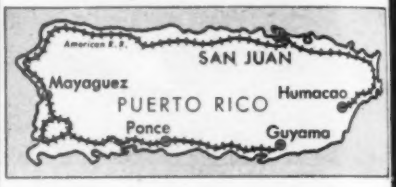
ODT's Railroad

Transportation agency took over Puerto Rico road at threat of strike in order to keep 'em rolling during sugar season.

SAN JUAN, P.R.—The 277-mile American Railroad of Puerto Rico, which serves 90% of the coastline, is now operating normally under the supervision of the Office of Defense Transportation while a National War Labor Board panel adjudicates a wage dispute.

• **Immobilized by Tugwell**—The ODT's Puerto Rico division, headed by Manuel Garcia de Quevedo, took over the road on May 14 by Presidential decree after a 48-hour immobilization period ordered by Gov. R. G. Tugwell. Arthur Kirkman, executive vice-president of the High Point, Thomasville & Denton R. R. of North Carolina, is acting as manager and has charge of operations. The workers voluntarily returned to work under ODT management pending settlement of their wage-increase demands.

The strike had its roots in a dispute settled last year by a small pay increase. Last month a union demand for a 25% boost caused Insular Commissioner of Labor Manuel Perez to propose a 12½% raise, which was turned down by the company on grounds of inability to pay. After ineffective efforts to bring the disputants together on compromise adjustments, the ODT took over.



• **Complex Setup**—The railroad's corporate setup is complicated. The Compania de los Ferrocarriles, a Spanish corporation, owns all the properties and equipment; the American Railroad Co., a corporation of the state of New York, is the operating company; a domestic corporation, the Compania Ferrviaria de Circumvalecion, is a holding company controlling all the stock of both the owning and operating companies.

There are three other railroads in Puerto Rico with a total of 163 miles of track.

The strike on the American Railroad of P.R. affected 1,300 permanent employees and 300 temporary sugar season workers. Coming at the height of the grinding season, it would have severely handicapped the island's sugar industry had not the temporary government supervision kept the trains moving.

CANADA

"Wood" Alcohol

McCormick's newsprint firm employs wood pulp waste to make new byproduct; would supply alcohol to Canada.

Determination of Col. Robert R. McCormick of Chicago to prove that it is feasible to manufacture alcohol from wood pulp waste has reached a critical test. The Ontario Paper Co., a subsidiary of McCormick's Chicago Tribune and the affiliated New York Daily News, has opened a sulphite liquor-alcohol plant in Thorold, Ont.

• **Manpower Insurance?**—Beyond its capacity for increasing the supply of industrial alcohol for the United Nations, the Tribune-News venture into this field could have been influenced by other considerations, including manpower and hydroelectric power. With alcohol as a byproduct, a paper mill would be more certain of adequate personnel to maintain capacity flow of alcohol, and incidentally newsprint.

Ontario Paper Co. lost more than 50% of its electric power last fall in an arbitrary diversion from newsprint plants to war plants ordered by the Dominion. The Thorold plant was to have closed when its woodpiles were exhausted (about two years). Alcohol for the war may give it a new lease on life and a better position in the Canadian newsprint profits pool (BW—Jan.9'43,p60).

Cost of the Thorold plant has been approximately $500,000, according to the Tribune. Cost of making alcohol there has not been announced pending negotiations between the company and its customer, the Canadian Dept. of Munitions & Supplies, but estimates given the Gillette committee of the U. S. Senate during its rubber investigation indicated a cost of 20¢ a gallon. Grain alcohol from wheat costs the Defense Supplies Corp. as much as 60¢ a gallon, it is reported in Washington, and synthetic rubber factories are paying up to 50¢.

• **Process Uses Yeast**—Consultant on the project was Dr. M. Rosten, a Polish refugee with a background of power alcohol manufacturing in Europe. The process uses yeast to ferment the sugar left in wood pulp waste after the pulp has been treated with sulphuric acid, after which the waste liquor is neutralized with lime. The resulting alcohol is concentrated by evaporation.

If the sulphite liquor process meets the expectations of its sponsors, it can look forward to an enthusiastic reception in other paper mills, many of which

ve been plagued for years by the prob- of what to do with their stream- olluting waste. Government officials the U. S. and paper mill owners have en skeptical, pointing to the experi- ce of a sulphite liquor establishment New York, which was abandoned in 16 as unprofitable. The Tribune's ply is that the New York project was signed in excess of its raw material pply and lacked many technical de- lopments made in the past 25 years.

Production Schedule—The Thorold lant, whose chief executive is Arthur Schmon, a captain in McCormick's rtillery regiment during the World War, has an annual production schedule f 700,000 gal.

Army Heads List

Munitions industries drop o fourth place in priorities on anpower; emergencies im- ending in fuel, food supplies.

OTTAWA—Priorities in manpower ave been revised in Canada to conform o the United Nations recent shift rom the defensive to the offensive and o meet new shortages on the Domin- on's home front. The order of pref- rence in manpower is now (1) Army; 2) fuel production; and (3) food pro- duction.

Munitions production has dropped o fourth rank because (1) reserve stocks re up to estimated requirements for everal months in most lines; (2) officials igure that heavy reinforcements will oon be needed for the Canadian Army; nd (3) serious shortages impend in uel and food.

• **Government Bonus**—In an effort to oost output of coal, Ottawa probably will offer miners a production bonus following a conference this week be- tween National War Labor Board and Emergency Coal Production Board, representing government and coal mine operators and union representatives. The bonus is the principal proposal before the conference. It will be paid by the government directly to the miners if the plan is adopted. Government con- trol of coal mines in imitation of Wash- ington's example is proposed by some Labor Dept. officials, but indications are that the bonus will be tried first.

War plant operators have been warned by Ottawa that they cannot now count on Army draft deferment for essential men. Less than 4% of the 900,000 Canadian war industry work- ers are under draft deferment, and the percentage is being pared.

• **Special Cases**—Shipbuilding and air- craft production are the only branches of war industry accorded special con- sideration in the new order of man-

power priorities. Munitions Minis C. D. Howe has seized control of th shipyards in the Quebec district wh operations were curtailed by str action.

Ottawa is not interfering in strikes other war plants. A big Hamilt (Ont.) plant has closed down with o cial approval following a strike, a partial idleness of eight plants at G Ont., continues into the second mon without intervention.

Ottawa's Rubber

Big plant at Sarnia, to be operation by November, will b run by government after wa capacity 34,000 tons a year.

Canada's big synthetic rubber pla at Sarnia, Ont., will be in full produ tion by November, according to prese plans. Annual capacity will be 34,0 tons of Buna-S and 8,000 tons of but rubber. Canada already has Thiokol production.

• **Postwar Operations**—The Sarnia pla is owned and will be operated by th Ottawa government. Munitions Min ter C. D. Howe has served notice th the government will continue operatio after the war and its output—enoug for all Canadian requirements—will b available for commercial users.

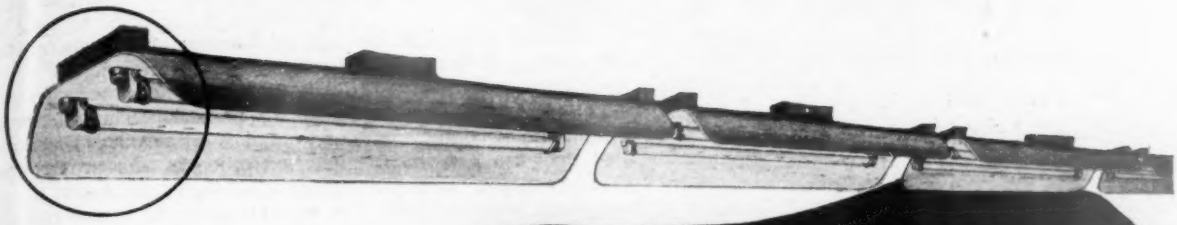
Government ownership of all new war plants of uncertain postwar valu is being decreed by Ottawa to avoi political charges that, under depreci tion writeoffs for taxation purposes private owners are securing plant and equipment at the expense of the treas ury. Before they can apply for depre ciation allowances on plant extension or new equipment, war contractors ar now required to estimate the postwa value of the installations. Unless the admit a valuation which would sub stantially lower depreciation allowance the government will insist on financing the capital expenditure and owning the new plant.

• **Investigation Denied**—By refusing to accept responsibility for taking attention of Aluminum Co. of Canada, Ltd., ex ecutives away from war production Howe has blocked a political demand for a probe into financing of that com pany's expansion, prices charged for aluminum, and alleged relations with international cartels.

The House leader for the Progres sive Conservatives, Gordon Graydon, asked for a commission of inquiry in Canada and a move by Ottawa for an international commission.

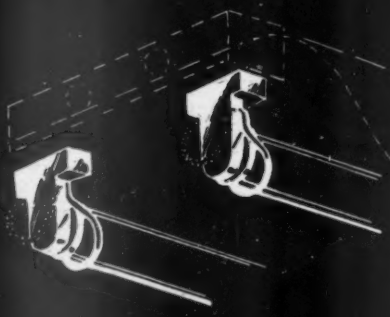
• **Little Change in Profits**—Company figures show net profits for 1942 only $30,000 above those for 1939 although output was seven times greater.

MILLER DOES IT AGAIN!



...with a patented SAFETY LAMP LOCK which prevents lamps from falling!

STUDY CAREFULLY *the details of the MILLER patented Safety Lamp Lock as shown at the right. It is an integral part of each socket—prevents lamps from falling.*



There are several highly significant features of the new MILLER Aero-Designed fluorescent fixture, and its compliance with WPB regulations limiting the use of steel.

Of all features, none is more noteworthy than the MILLER Safety Lamp Lock. The vital spots where it gets in its good work are shown in the circled sockets in the continuous run of fixtures at the top of the page, with the details diagramed immediately above.

It is an extremely important feature to you . . . because it minimizes the risk of lamps falling from sockets. Fool-proof under all conditions, it can mean the saving of time and money in your busy plant . . yes, the prevention of dangerous accidents, too.

This Safety Lamp Lock is *exclusive* with MILLER. It's a product detail that undoubtedly is one of the best available demonstrations of the constant alertness of MILLER lighting engineers in your interest. It's your best reason for calling in a MILLER field engineer (located in principal cities) today, to talk more about this Aero-Designed fluorescent lighting, and how it can help you.

Other Noteworthy features

FLANGED TOP CHANNEL *simplifies installation—saves labor.*

"EXTRA LENGTH" REFLECTORS—*shield lamp ends—of sturdy Masonite with reinforcing attachment straps.*

IVANITE *the "sealed-in-surface" finish—durable, easy to clean, high reflection factor.*

STREAMLINED—*completely wired channel with exposed ballast for heat dissipation.*

THE MILLER COMPANY • MERIDEN, CONNECTICUT

ILLUMINATING DIVISION
Fluorescent, Incandescent
Mercury Lighting Equipment

OIL GOODS DIVISION
Domestic Oil Burners
and Liquid Fuel Devices

ROLLING MILL DIVISION
Phosphor Bronze and Brass
in Sheets, Strips and Rolls

WAR CONTRACTS DIVISION
War Materiel

MILLER
SINCE 1844

LABOR

Soldiers Return

More than a million have been mustered out so far, and finding them jobs is warmup for tremendous postwar task.

A man begins dying the day he is born, and an Army starts demobilizing the day it mobilizes. By the end of this year, more than a million men will have been discharged from the Army since the start of the draft for one reason or another—casualties, psychiatric reasons (about 20%), overage, etc.

• **Employment Office**—Handling reabsorption of discharged soldiers is the responsibility, under the draft law, of the Selective Service System. SSS has had a Reemployment Division ever since it was organized, a division that will have an overwhelming job to do when the war ends but that meanwhile plugs along giving a hand to the men who come home.

If the returning warrior left a job to go into the Army, wants it back, and is physically fit to handle it, it's up to the Reemployment Division to get it back for him. The draft law requires employers, private or federal, to take back honorably discharged draftees at the same pay and seniority at which they left—unless the employer's circumstances have so changed that this is out of the question.

• **General Policy**—Selective Service hasn't interpreted the mere fact that a replacement has been hired as fulfilling this latter condition. It holds that anyone hired to replace a drafted man is a temporary employee and must be fired, if necessary, to make room for the returning soldier. If the drafted man himself was a temporary employee, this doesn't apply. That is, if Smith was drafted and Jones hired to replace him, and Jones subsequently was drafted but later came back, Jones has no right to get his job again.

There have as yet been no court tests of the reemployment provision. Of the thousands of cases handled by SSS, only one got to court, and that was settled privately as soon as the employer realized that SSS meant business.

• **Moral Obligation**—Where, for one reason or another, the veteran is not entitled to some particular job, SSS has no formal obligation toward him (though he may be entitled to pensions or other veteran benefits if wounded). However, Selective Service does consider that it has a moral obligation to get him settled in civilian life. Actually, more and more of the cases fall in this latter category.

Many of the returning soldiers have picked up some training in the Army which, they feel, entitles them to a better job. Many others want training or supplementary training. An increasing number preceded their military service with a trick in a war plant; with the turnover in these plants, most such men have no reemployment rights.

• **Method of Handling**—Under present conditions, of course, it's no tough job to find work for physically fit veterans. The Reemployment Division organization is correspondingly simple. Attached to each draft board—except in large cities, where central organizations are set up—is a reemployment committeeman appointed (like members of the draft board itself) on a volunteer basis from among outstanding citizens.

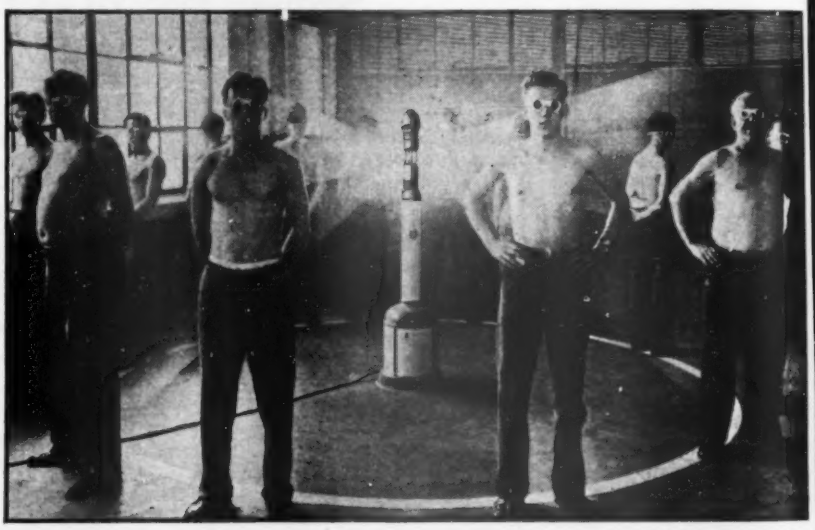
It's the job of the committeeman to keep in touch with the facilities of the U. S. Employment Service, the Veterans Bureau, training agencies, the home service office of the Red Cross, and the like. Returning soldiers are instructed to get in touch with the committeeman, who then acts as their representative, either in getting an old job back or in routing them to the appropriate agency.

• **Local Preparations**—In addition, SSS is sponsoring the formation of clearinghouse committees composed of representatives of the Chamber of Commerce, National Assn. of Manufacturers, the Grange, unions, fraternal organizations, and the like. National and state groups have been organized, and local groups are now in formation. These committees are expected to exert community pressure to assure preferred treatment for the veteran.

By and large, Selective Service considers its postwar job as an extension of what it is doing now. Broad policy questions such as the proper rate at which to discharge the Army, the order in which men should be sent home, and the like are outside its jurisdiction.

• **Many Difficulties**—Inevitably, a certain unreality hangs over any attempt to plan the demobilization of the Army in advance in social terms. For one thing, the problem of providing jobs for returning soldiers is actually the whole problem of guaranteeing a high-employment economy after the war. For another, the best-laid plans are likely to be upset by political pressure from soldiers and their relatives.

Nevertheless, some planning is being done. Under the auspices of the National Resources Planning Board, a committee headed by Floyd W. Reeves has been meeting regularly for nearly a year now. It is composed of representatives of the Army, Navy, SSS, War Manpower Commission, departments of Labor and Agriculture, Federal Security Agency, and Veterans Administration. It has done a lot of work and is on the verge of submitting a report to the President.



INDUSTRIAL TAN

Because of overtime hours, many war workers have no chance to soak up natural sunshine, so a growing number of companies are bringing artificial sunshine into their plants. To expose large numbers of workers simultaneously to ultraviolet rays, Hanovia Chemical & Mfg. Co., Newark, N. J., has developed a "lighthouse" which shines on a dozen or more persons at a time. One is now being installed in the Harrison (N. J.) plant of the RCA Victor Division of the Radio Corp. of America on recommendation of the plant's war production drive committee.

Foremen Rebel

Ford supervisors' walkouts demonstrate that NLRB ruling won't stop them, but that they can't tie up production.

From the strike of foremen at Ford Motor Co.'s Detroit plants last week end and the new walkout on Wednesday, employers learned two lessons:

(1) That the dominant labor union of foremen will not permit its lack of standing before the National Labor Relations Board to interfere with the achievement of its objectives.

(2) That production continues surprisingly well without foremen, according to Ford.

• **Recognized by NWLB**—But the large industrial establishments which are grappling with the problem of union representation for supervisory personnel (BW—Apr.17'43,p102) noted, too, that the National War Labor Board, which in many ways is transcending NLRB in importance, accepted jurisdiction over the Detroit dispute, thus yielding government recognition to the Foreman's Assn. of America.

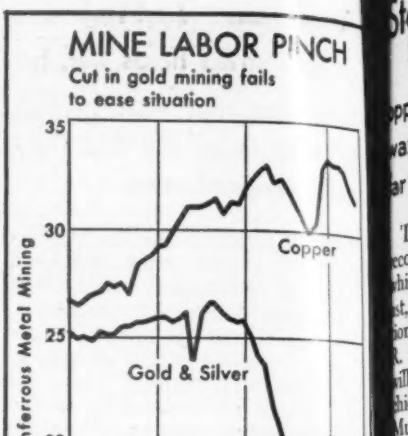
The spontaneity of the Ford strikes belied early impressions that they were a trial balloon. Under the Ford-F.A.A. contract (BW—Feb.20'43,p92), the company and the association were in process of adjudicating two grievances, one over the discharge of three men, the other over interpretation of the base-pay clause in the agreement.

• **Advertisement Posted**—Last Saturday, after NWLB had been asked to intervene, the union inserted a half-page advertisement in a Detroit newspaper under the heading, "We Do Not Want to Strike," describing both sides of the pay controversy. The union reports that when copies of this advertisement were posted on the bulletin boards in the magnesium plant of the Rouge Works, the 28 foremen in the plant were laid off, apparently as a disciplinary measure.

From late Saturday until the union ordered its men back early Monday, the strike spread through the Rouge, Highland Park, and Willow Run plants.

• **No Help from U.A.W.**—While some production workers, notably at Willow Run, refused to cross the F.A.A.'s picket lines, the strike won little sympathy from the C.I.O. United Auto Workers. The U.A.W. instructed its members to pass the picket lines but to perform no supervisory duties.

When NWLB agreed to review the dispute, Robert H. Keys, the former Ford foreman who is president of the F.A.A., instructed his members to return to work. And when they complied, the union reported, 2,500 of the strikers



Furloughing of soldiers for work in the mines raised total employment in nonferrous metals briefly last fall, but it hasn't meant permanent relief. And closing of all gold properties other than those with large output of byproduct base metals has done little for copper, lead, and zinc mines.

found that their time cards had been removed from the racks. The company questioned the returning strikers, and Wednesday's fast-spreading walkout started when rumors went around that 25 of those questioned had been fired.

• **Test of Solidarity**—Union officials seemed pleased at results of the first test of solidarity since NLRB reversed its stand on foremen's unions. Originally, the board had held (in the case of the Mine Officials Union of America) that foremen were both employees (of the company) and employers (of the production workers), but as employees were entitled to the privileges and protections of the National Labor Relations Act (BW—Jul.4'42,p78). Following a change of board personnel, NLRB reversed this stand last month in the Maryland Drydock Co. case (BW—May 15'43,p8).

Steelman Tunes In

But Petrillo holds out, his opponents are getting by, and waxed music still seems to be far from harmonious.

The refusal of musicians to make recordings or electrical transcriptions, which has been in force since last August, is now in the hands of the Conciliation Service of the Dept. of Labor. John R. Steelman, director of that agency, will try his luck with James C. Petrillo, chief of the American Federation of Musicians who has successfully defied nearly everyone else in or out of government, including a special subcommittee of the Senate Interstate Commerce Committee under Sen. D. Worth Clark, which held a number of fruitless public hearings on the Petrillo ban on waxed music.

• **Transcription Makers' Idea**—Move to put the long-drawn case in the hands of Steelman was made by the electrical transcription manufacturers, who make 33-in. platters especially for the radio broadcasters.

Trying to bring the musicians union and the electrical transcription makers together for Steelman is James William Fitzpatrick, New York theatrical expert.

Whether Fitzpatrick can do much good is a big question since the whole issue cannot be solved by the transcription men. There are also the juke box operators, whom Petrillo regards as prime leeches on the musicians' body, who are not joined in a single trade organization, and who promise nothing.

• **Ascap Idea Unpopular**—Only one serious proposal has been advanced by the A.F.M. (refused by record makers and transcription makers alike), and that would set up a taxing system similar to the one employed by the American Society of Composers, Authors & Publishers. This fund would build up a huge fund for the A.F.M. to distribute to its unemployed musicians. But radio has had a long, unpleasant relationship with Ascap systems, and the transcription makers can have no enthusiasm for what their best customers don't like.

Main factor working against any early settlement is that all radio stations, juke box operators, and sundry other users had long notice of Petrillo's intention to invoke the ban and built up huge stocks of the musical selections then existent. All have lived off this fat since then. Record makers have been marketing reissues of old recordings, and the few new numbers have been vocal arrangements. While this has been inconvenient for the music users, it has been by no means unbearable. And it's unbearable situations that make strikes successful.

Detroit's war production was set back in the early days of this week, especially at plants like Ford's employing a high percentage of Negroes, by race rioting which climaxed sporadic outbursts of this sort the country over. Detroit's transport was crippled when drivers refused to take vehicles out. Negroes were afraid to leave their homes even after troops moved in. Local police, although using tear gas (above), weren't up to the situation.

Race Riots Hurt

War plant work disrupted by the withdrawal of Negro workers for their safety and by voluntary absences.

The race riots in Detroit and Beaumont, Tex., within the past fortnight underline a problem confronting employers on both sides of the Mason-Dixon line for whom the employment of Negroes alongside whites has caused a continuing headache. Unlike the previous Michigan clashes, touched off ostensibly by resentment at promotion of Negro employees (BW—Jun.12'43,p94), this week's sanguinary demonstrations in Detroit did not grow out of employment disagreements. But the recoil from the blowoff ripped great holes in plant attendance records.

• **Manpower Potential Neutralized**—Beyond reawakening old prejudices among employees, the Texas riots had the collateral effect of neutralizing much of the Beaumont area's wartime manpower potential, for the threat of sporadic outbreaks in points within a 25-mile radius of Beaumont induced police authorities and employers alike to send Negro workers home until the storm blew over.

Beaumont's restaurants and laundries had to close for lack of Negro help. State highway patrolmen escorted several hundred Negro workers from one war plant to their homes in the Negro quarter. At Orange, 26 miles from the scene of the Negro assault on a white woman which precipitated the riots, one of the shipyards turned away its Negro employees while the trouble flared.

• **Few in Skilled Jobs**—The disorders in Beaumont merely focused attention of the rest of the country on a problem which has been smoldering, with an occasional outbreak, since the necessity for all-out war production brought the South's personnel segregation system into serious question. The Negroes complain that they are barred from skilled jobs, and employment figures from at least one area—Houston—show few Negroes in skilled or even semiskilled occupations. While acknowledging this, employers argue that to put Negroes to work alongside whites in skilled jobs would be to risk counterdemonstrations by the whites which would jeopardize both the safety of the Negroes and the war output of the plant.

Of 43,000 persons employed at shipbuilding in Houston, 3,789 are Negroes; and of these, only three are in skilled or semiskilled occupations. Building construction, with about one-fourth as many employees, has no Negroes in skilled or semiskilled jobs. And though Texas-trained Negro aircraft workers find ready employment in such places as Los Angeles, St. Louis, and Wichita, Kan., few land in anything but unskilled jobs in Texas plane plants.

• **Color Line Abolished**—The National War Labor Board cut through the surface of prejudice with its decision in the Southport Petroleum case abolishing the color line in payroll classifications and directing equal pay for equal work. But employers on the whole still take the position that it is poor economy to

Buy War Bonds and Stamps

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Each part, each function, each assembly (and they total thousands) had to be arranged and tooled. Boeing, for example, developed more than 100,000 *special* tools to do the job.

One result is that Boeing's output is the greatest of any aircraft manufacturer—per man, per machine, per unit of floor space. Today, Boeing is building Flying Fortresses at a rate *eight times greater* than the month before Pearl Harbor.

Further, the results of Boeing's planning are, in turn, helping other companies to speed up America's aircraft production. For, under the BDV agreement, Boeing has made its plans and specifications available to both Douglas and Vega which also build Boeing Flying Fortresses.

• • •

Once peace is won, you can look to Boeing's research, design, engineering and manufacturing genius to bring you many a new and interesting product . . . with the sure knowledge that if it's "Built by Boeing" it's bound to be good.

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*THE TERMS "FLYING FORTRESS" AND "STRATOLINER" ARE REGISTERED BOEING TRADE-MARKS

bring 20 Negroes into a sho[w] if there [is] a danger that it will stir [up] trouble among 400 whites.

Mobile, Ala., had a demo[nstration] of this when the Alabama D[ry] Dock & Shipbuilding Co. employed [ten] Negro welders for the night shift. The riot which occurred the first nigh[t] they reported for work, kept 2,000 N[egro] workers out of the yard and 10,[000] from neighboring plants for several days until order had been restored by the Army.

Foot in the Door

C.I.O. finally wedges into Douglas Aircraft with election victory at small Vernon plant; runoff sought at El Segundo.

Union officials of the West Coast always have admitted that one of their toughest assignments has been to organize Douglas Aircraft Co. in Southern California. For five years, the United Auto Workers (C.I.O.) and the International Assn. of Machinists (now independent) have made repeated attempts.

That's why results of the National Labor Relations Board collective bargaining election last week in two of the Douglas plants—El Segundo and Ver-

BLADE SAVER

Revival of a smart idea for getting double duty out of hacksaw blades has earned Leonard Yates (above) a WPB citation and two cash prizes. In cutting pipe at the Tube Turns plant, Louisville, Ky., Yates found that only part of his 18-in. blades wore out; the blade could then be cut down for a 14-in. saw. WPB's War Production Drive Headquarters (BW—Feb.6'43,p76) awarded him $75 on top of $50 paid by the company.

ion—are being studied with interest by management and labor unions. Only the El Segundo plant can be considered among the major Douglas factories comparable in size, for instance, with those at Santa Monica and Long Beach. The small Vernon unit is described by the Douglas management as "a temporary overflow from the Santa Monica plant." The votes cast at Vernon represented less than 0.5% of total Douglas employees.

• **I.A.M. to Seek Runoff**—At El Segundo, 44.7% of the employees voted "no union". Surprisingly, only 16% favored the C.I.O. union, while the I.A.M. scored 39.3%. It had been considered generally that the C.I.O. had the edge in whatever prounion sentiment existed among Douglas workers.

I.A.M. officials promptly announced they would demand a runoff election at El Segundo with ballots marked "I.A.M. yes or no." C.I.O. leaders let it be known they will intervene in "any new action or election."

C.I.O. officials are exultant over the fact that at Vernon the U.A.W. got 60.9% of the votes cast. The I.A.M. received 13.9%, and the no-union sentiment represented 25.2% of votes cast.

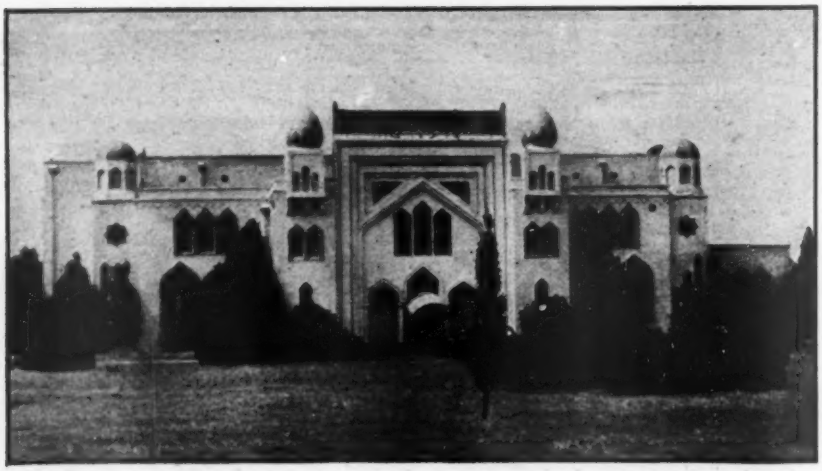
Men vs. Contracts

Pittsburgh employers find that "labor shortage" tag steers new orders away and appeal to WMC for reclassification.

Add Pittsburgh to the list of industrial areas that regard the "labor shortage" tag of the War Manpower Commission as something short of a blessing. Pittsburgh employers are finding—as Rhode Island employers did (BW—Jun. 12'43,p100)—that Group II classification in the WMC's manpower tables is stemming the flow of contracts from the federal procurement agencies.

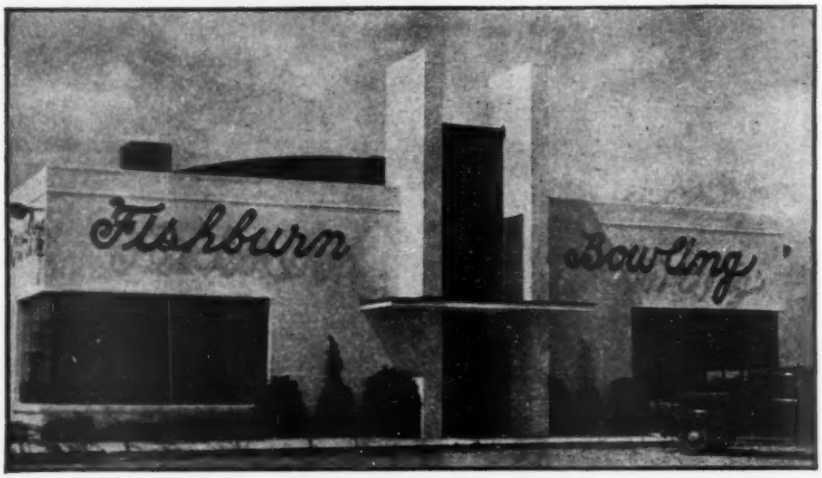
• **Requirement Shrinks** — Pittsburgh landed in Group II (area of labor stringency, shortage expected in six months) after a survey conducted early this year by the U. S. Employment Service indicated that the area would need about 71,000 additional workers by Mar. 1, 1944. Group II rating (BW—Feb.20 '43,p14) puts the area out of bounds for new war contracts which can be placed where labor is more plentiful.

Whether Pittsburgh employers, to be on the safe side, padded their personnel requirements when USES was making the survey can only be surmised. But now that the results of the survey have been driven home, the requirement has shrunk from 71,000 to 39,000, through a resurvey of the same plants promoted by the Pittsburgh Chamber of Commerce after consultation with the Pitts-



JINX OVER BAGDAD

Apparently hounded by the same financial jinx that routed former occupants, the C.I.O. auto workers of North American Aviation are moving from Bagdad (above)—their headquarters at Dallas, Tex. Less ornate are the new offices in a bowling alley (below) and field headquarters in an old gas station (left). Bagdad had previously housed several night club flops.



burgh Ordnance District and representatives of the War Production Board and of WMC.

• **Questions by WMC**—The Pittsburgh WMC office doubts that the resurvey sufficiently took into account that from 60% to 80% of industrial replacements in the next few months will be caused by Selective Service. After another checkup, WMC estimated the area's manpower needs up to May 1, 1944, at 60,000.

Armed with their own survey, Pittsburgh representatives went to Washington to urge Lawrence Appley, director of WMC's placement bureau, to transfer the district from Group II to Group III (labor shortage after six months) or Group IV (no shortage). Spokesmen for the production service branch of WPB, the ordnance district, and the Chamber of Commerce argued jointly that classification of Pittsburgh in Group II not only reduces the allotments of contracts to Pittsburgh, but also hurts surrounding counties in Pennsylvania, West Virginia, and Ohio because the three procurement district offices located in Pittsburgh cover this extended territory.

• **Scattered Shortages**—Outside of critical labor situations down the Ohio and up the Beaver valleys, where shipbuilding, aircraft, and rubber industries are expanding rapidly, the committee contended, the labor supply is nearly normal in Western Pennsylvania and WPB records show a weekly total of 140,000 to 175,000 idle machine-hours. It was argued that districts presently classified in Groups III and IV have no labor difficulties because they do not have the plants or equipment to produce war goods.

Although Pittsburgh industrial plants hired 12,000 women between Jan. 1 and Mar. 31 and women now comprise about 12% of the working force, the Pittsburghers contended that women, Negroes, and minority groups still constitute an important labor reservoir.

• **Hoarding Admitted**—Recent cutbacks in Army contracts also have released additional production capacity, and with it, labor. It was admitted that some companies are hoarding this labor in the hope they can replace contracts, and that many industrialists continue to advertise for a much larger number of workers than required so they may have a selection.

Appley, represented as being sympathetic, replied that when periodic surveys show a change in the manpower situation, the WMC automatically reclassifies areas.

BLOOD TESTS ORDERED

How trade unions can assist in the prosecution of vigorous public health programs was illustrated by the decision of the California Federation of Labor to require new members of A.F.L. unions to submit to blood tests for venereal infection. Old members, too, are expected to take the tests, because they will be performed without charge by the State Health Dept. and the results will be held in confidence by the union. Tests on 10,000 San Francisco union members turned up 336 syphilitics, only about one-fourth of whom had previous knowledge of their infection.

The executive board of the state federation is notifying all California local unions that applicants for membership must submit to the tests before they can be admitted. The results of a test will have no bearing on whether the applicant is accepted by the union, or whether he gets or keeps a job.

State health officials hailed the move as "the door-opener to the most comprehensive health program this country has ever seen." It was noted, however, that state federations—chartered directly by the A.F.L., not by its constituent unions—can enforce such dictates only upon so called federal locals, unions without international affiliation also chartered by the A.F.L. Craft locals—such as carpenters, teamsters, boilermakers—enjoy a degree of autonomy, are answerable only to their respective international unions.

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When a new plane is delivered it must be ready to fly. In the first minute of its useful life the engine must deliver its maximum horsepower. There is no time to "break in" the motor on a new fighter. All new engines are given production test runs at the factory.

When American manufacturers were building plane motors in limited numbers, gasoline used for factory tests wasn't important. But today, millions of gallons are used every month for testing alone—producing power that would result in nothing but wind if propellers were used to load the engine.

But that power is now being reclaimed. Westinghouse engineers applied electrical equipment to provide the correct load for engines under test and to generate electrical power at the same time. This power is fed back into the plant's own power line—sometimes furnishing as much as 60% of the power required to operate the factory. Electrical energy, formerly wasted, is now helping to build more motors for Uncle Sam's fighting planes.

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FINANCE

Bonds—or Else

Treasury changes its plan for financing war; Wall Street is sore, but it was either that or compulsory saving.

Reorganization of the Treasury's bond selling machinery was just about complete this week, but it will take a long time for Secretary Henry Morgenthau to make his peace with securities salesmen and bankers. Professional securities men think they have been sold down the river, and most of them don't mind saying so.

• **Merger, Theoretically**—Under the new system, a set of War Finance Committees, organized along state lines, will handle the big loan drives. Theoretically, they represent a merger of the Treasury's own War Savings staff and the old Victory Fund Committees, made up of bankers and securities men. However, to Wall Street it looks as though the Treasury has scrapped the Victory Fund Committees and given its War Savings staff a free hand.

The idea of taking orders from the War Savings staff was what ruffled professional securities men. Work of the two groups overlapped in a good many spots, and competition between them was keen. In the two previous loan drives, Victory Fund Committees accounted for most of the sales, and they felt that if anyone had to move over, it should be the War Savings staff.

• **Is This Appreciation?**—Announcement of the change brought an immediate howl from salesmen who had just finished the April drive. One bond dealer exploded, "We raise $18,000,000,000 hard cash for that guy Morgenthau, and before he gets his hands out of our pockets he kicks us in the pants."

Actually, Morgenthau isn't as much of a contortionist as the metaphor suggests. Behind the reorganization lie a good many factors that Wall Street didn't see on its first angry glance.

For one thing, the combination of the Victory Fund Committees and the War Savings staff is a real merger, not just a cover-up. Membership of the new War Finance Committees shows that the Treasury has not tried to freeze out bankers and securities men.

• **The Peacemaker**—In New York, where friction was greatest, securities men expected the Treasury to hand over the new committee to Richard Patterson, head of the State War Savings staff. Instead it picked W. Randolph Burgess, vice-chairman of National City Bank. Burgess, big, polite, impressive, can keep

both sides in line. As chairman of the economic policy commission of the American Bankers Assn., he has spoken for commercial bankers since the start of the war. A former deputy governor and vice-president of the New York Federal Reserve Bank, he knows the governmental ropes.

As Wall Street suspects, the War Savings staff almost certainly had a hand in the reorganization. It was making a poor showing in the big drives, largely because its work was concentrated on sales by payroll deduction. Salesmen for the Victory Fund Committees worked with lists of bank depositors and sewed up all the big buyers long before the War Savings staff got around to them.

• **Anti-Inflation Step**—However, the main reason for the reorganization wasn't face-saving. It was the growing emphasis on selling bonds to individuals, preferably to wage and salary earners in the lower brackets. In overhauling its bond-selling organization, the Treasury is making a last, desperate attempt to mop up income at the bottom of the scale where inflationary pressure is greatest.

Although the two previous loan drives rang up impressive totals, most of the subscriptions came from big investors and institutions. In April, only $3,290,000,000 of the $18,533,000,000 total came from individuals, and less than $1,500,000,000 of this represented sales of Series E bonds, the anti-inflation buy for small investors. In December, individuals subscribed $1,589,000,000 of the $12,937,000,000 total, a scant $726,000,000 of it in E bonds.

• **The Easy Market**—In trying to run up their selling records, Victory Fund salesmen naturally concentrated on the big buyers. Many of them spent a good deal of their time calling up insurance companies and savings banks, asking for a slice of their orders. The trouble with this was that the big boys needed no prodding. They knew in advance how much they would subscribe.

One candid dealer admits privately, "We did a hell of a swell job, but it wasn't the job we were supposed to do."

The Treasury can't be sure that the new selling system will work any better than the old one, but it has to take the chance. With tax increases postponed at least until 1944, the only way it can take the inflationary curse off its borrowing is by getting everything it can from small investors.

• **Alternative: Forced Saving**—The beleaguered Office of Price Administration has been yelling for some sort of help from the Treasury. Federal Reserve authorities have been as critical as official courtesy permits. Morgenthau knows that if he can't sell the small investors, he will have to back water and come out for compulsory savings.

Even granting the purity of the

Treasury's motives, securities men have their doubts about the success of the new system. Two assistants to the Secretary already have resigned in protest.

• **Taxes and Savings**—First test of the new system will begin Sept. 9, when the Treasury starts its next big loan drive. The date itself is a sign of how the emphasis has shifted. On Sept. 15, upper bracket taxpayers have a quarterly instalment to meet, but wage earners in the first surtax range will be covered by withholding at the source. They are the ones the Treasury wants to get.

Earnings Up?

Dept. of Commerce says they are, but stockholders may note that figures don't allow for certain deductions.

Every investor has his own idea of what is happening to corporate profits, but the official last word on the subject is the series of estimates compiled by the Dept. of Commerce. This week, the department released its figures for 1942 and the first quarter of 1943. Stockholders found them hard to believe but hoped they were right.

• **First Quarter Gain**—According to the estimates, corporate profits are on the way up. In 1942, they just about equaled 1941, despite a tremendous jump in taxes and a steady rise in production costs. In the first quarter this year, earnings after taxes of all corporations ran up about 18% above 1942 and 43% above 1941.

Total earnings after taxes came to $6,884,000,000 last year, which stacks up against $6,857,000,000 in 1941 and $4,847,000,000 in 1940. Income before taxes bounded from $13,938,000,000 in 1941 to $18,784,000,000 last year.

• **Automobile Squeeze**—Although total earnings held steady in 1942, stockholders of hard hit companies know what they are talking about when they say it was a tough year. Net profits of manufacturing companies dipped from $4,534,000,000 in 1941 to $4,428,000,000 in 1942. Automobile manufacturers ran into a particularly tight squeeze, sliding down from $407,000,000 to $367,000,000.

Offsetting the slump in manufacturers' profits, the transportation industry scored a gain of $130,000,000 during the year, rising from $345,000,000 to $475,000,000 even after taxes. Railroads accounted for most of this, with a jump from $105,000,000 to $202,000,000.

• **Some Explanations**—From a business man's standpoint, the Commerce estimates overstate net profit, because they take no account of postwar re-

THE MARKETS

Still waiting for something definite to come out of the war news, Wall Street spent a drowsy week while the stock price averages shuttled back and forth across familiar ground. Volume trailed off as bored traders retired to the sidelines, and on Tuesday, Big Board turnover slid below 700,000 shares for the first time this year.

• **No Response on Taxes**—The market's reaction—or lack of reaction—to tax news has been a big disappointment to some of the more hopeful bulls. When congressional leaders first announced that they didn't intend to boost taxes on corporate incomes in 1943, a good many traders thought they would get a nice ride on the strength of the news. But the market took the announcement stolidly, and after waiting impatiently for almost three weeks, the bulls have decided it was all a false alarm.

Part of the market's indifference comes from the fact that prices had pretty well discounted the tax outlook long before congressmen would pin themselves down to a definite promise. However, the main reason is that Wall Street is basing its valuations on estimates of the future. The two big questions are when the war will end, and how much inflation we shall have. On these points, the outlook remains hazy as ever.

• **Some Hardship Cases**—Although most security prices are still close to their recovery tops, some of the hard-luck cases have taken a steady beating. For example, the 3¼% bonds of New York's Triborough Bridge Authority are now quoted around 95. A year ago, they were selling at 105.

Triborough security holders have had more than their share of bad news lately. First, gas rationing knocked the props from under them by cutting down automobile traffic and tolls. On top of that, the Treasury has brought a test case challenging their tax-exemption privilege. Although the law always has been vague, most investors had assumed that bonds of a municipal corporation got the same exemption as outright municipals.

• **Income below Needs**—The Triborough Authority estimates its income for 1943 at about $3,320,000, less than half its 1941 net, and about $965,000 short of debt-service requirements for the year. To avoid default, the management is trying to get permission to service its bonds by transferring assets from reserves and operating funds. So far, it has got consents from the owners of about $58,000,000 of the $98,500,000 of bonds outstanding, but it needs consents from another $10,000,000 to give it the required two-thirds majority.

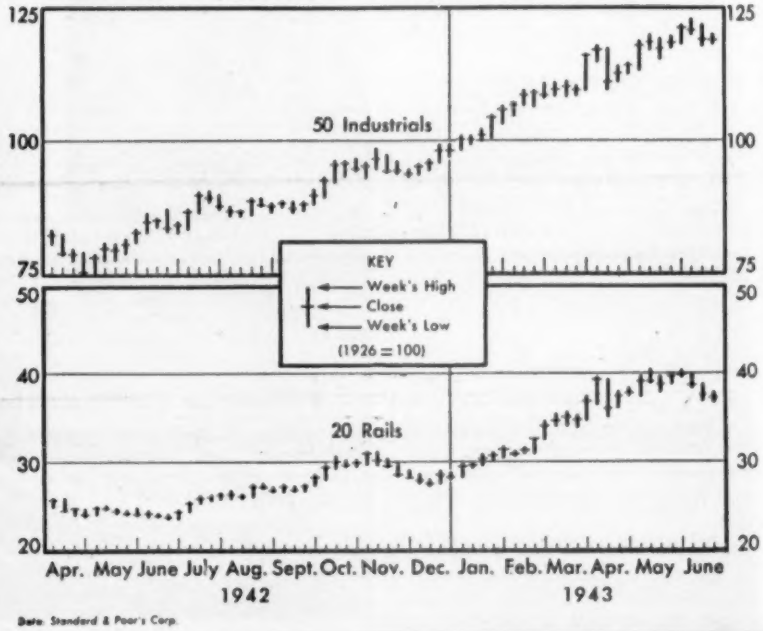
The Securities & Exchange Commission came through with a belated annual report this week, covering the fiscal year ended June 30, 1942. Remembering the commission's rules on prompt filing of corporate reports, Wall Street got a brief laugh.

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial	119.1	119.2	118.5	83.7
Railroad	37.2	37.5	39.7	23.8
Utility	47.4	47.2	47.0	30.5
Bonds				
Industrial	116.6	116.1	116.1	107.6
Railroad	98.1	97.3	100.2	82.5
Utility	114.5	113.9	114.0	104.5
U. S. Govt.	112.8	112.6	112.1	110.8

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

COMMON STOCKS—A WEEKLY RECORD



Data: Standard & Poor's Corp.

serves, deferred maintenance, or other items not allowed as tax deductions. Hence, earnings figures calculated by the department always are higher than the net income reported to stockholders.

Breakdown of the department's estimates of earnings after taxes comes out like this (millions of dollars):

	1941	1942	First Quarter 1943
Mining	$ 246	$ 243	$ 64
Manufacturing ..	4,534	4,428	1,166
Food, beverages, tobacco	567	573	158
Textiles, leather	345	330	77
Paper, printing.	273	230	69
Chemicals ...	440	403	113
Oil refining ..	155	134	35
Iron, steel	520	486	112
Nonferrous metals	172	167	47
Machinery (excl. elec.).	460	472	127
Electrical machinery	390	383	120
Transportation equipment .	265	369	89
Automobiles ..	407	367	99
Miscellaneous mfg.	540	514	120
Trade	884	830	219
Retail	509	483	128
Wholesale ...	375	347	91
Finance (excl. dividends rec.) .	—225	—200	—48
Transportation ..	345	475	124
Railroads	105	202	61
Other	240	273	63
Communications .	344	381	102
Power, gas	580	524	152
Miscellaneous ..	149	203	42
Total ...	6,857	6,884	1,821

COMMODITIES

Drive for Metals

WPB seeks to spur copper output in face of summer heat, but effort to tap lead's labor supply fails to work.

Under normal operating conditions, production of major nonferrous metals would drop somewhat during the hot summer period. But the war has changed all this and the War Production Board is out to increase production this summer, heat or no heat, a job that bumps right up against human nature.

• **There's Never Enough**—Meetings of advisory committees have been held in Washington to find a solution to the problem. Copper production in the United States looks good, showing a fair increase over last year, but the

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industry has been warned that there cannot be enough copper for the job that looms ahead, and WPB officials are asking for more and want no excuses.

Copper supply statistics, if available for public scrutiny, would make old-timers stagger. Imports have been substantial and our total supply of new metal, together with the tonnages recovered from scrap, add up to a figure the like of which no one has witnessed before.

• **No Extra Men**—The lead producers have been in Washington at the request of the WPB to explore the situation in that important industry. It was hoped by WPB that operations in lead might be curtailed temporarily to make manpower available for the production of more critical metals, chiefly copper.

After the meeting of the advisory group, WPB put out a news release that seemed to dim all hope for shifting a part of the labor supply. A large lead stockpile, which some feared would result in future trouble for the industry, has been diminishing in recent months, it was pointed out, because domestic output has decreased and imports have, for good military reasons, been on a smaller scale.

• **Imports Are Smaller**—WPB took note of all this and concluded that "the existence of these conditions, while not alarming at this time, accentuated the denial of a recent rumor that lead mines were to be closed because of oversupply." In fact, the necessity for stepping up domestic production of lead is now recognized. In addition, large supplies must be imported from Mexico, and from other sources when conditions permit.

In the days when the stockpile of lead mounted rapidly, this country obtained the metal from nearby Canada and faraway Australia.

The question of employing prisoners of war at domestic mines producing critical materials has been raised in Washington. It is agreed, however, that such PW labor would have to be restricted to above-ground operations.

MORE BURLAP

Prospects for users of burlap are the rosiest since Pearl Harbor. A situation in which supplies promised to disappear almost completely because of difficulty of shipping from India has now changed to one of relatively ample stocks.

Only danger, of course, is that it's a bird-in-the-bush proposition. The government, which is handling the purchasing and importing job, first bought 150,000,000 yards in Calcutta. Then it placed orders for 700,000,000 more. (Imports in 1940 were about 800,000,000 yards.) Early shipments from the 150,000,000-yard order already have been received. If all the rest comes through, things will be rosy.

THE TRADING POST

To What Purpose?

I wonder how many employers make it their business to read regularly the union newspapers that are distributed to their employees and to "take public notice" of what they may find there. Caterpillar Tractor Co. recently demonstrated that it does. Maybe others do too. If not, the practice deserves consideration.

In the Caterpillar case, the union paper printed an exceptionally vicious attack on the new "pay-as-you-go" tax bill. Based on wholly false premises, it assured its readers, with lurid variations, that the tax bill "is nothing more than a legitimate steal initiated by that bunch of half-wits called Congress."

Next day the Caterpillar Co. issued to all its employees a letter in which it disclaims any intention of commenting on "all the misleading statements, misrepresentations, libels and lies that are circulated among employees through the medium of the CIO weekly newspaper," but continues as follows:

"In the current issue, however, there appears an article on 'The Ruml Tax Plan' which contains these lies:

" 'For example, take our own company, the Caterpillar. Every article sold in 1942 had the tax added to the sales price. Now the Company don't have to pay these taxes so they put the money in their pocket. Now who does the money belong to? It belongs to the person who bought the article. But who gets the money given back to them? The purchaser? No! The manufacturer gets it, so you poor suckers can see who is benefiting by the Ruml Plan.' "

The company's letter then proceeds to explain that "neither the Ruml Plan nor the modification of it that has passed and is now the law, has anything whatsoever to do with taxes on corporations. . . . There is no 'forgiveness' of all or any part of them. There is no corporation tax money that is being given back to put in any company's pockets. . . . Caterpillar Tractor Co., for example, is paying in this year a federal income tax of approximately fifteen million dollars on 1942 income and no part of that tax is forgiven."

In its letter, the company pays its respects to an earlier offense of the same paper. "At that time," it says, "the Union spread the vile propaganda that any added expenses or added costs of payrolls were of no concern or consequence to the company. Such costs, the Union asserted, became a part of Company costs on Government cost-plus contracts and as such provided added Company profit. The truth—as anyone having the slightest interest in the truth could easily have determined—is that our company is supplying products to the Government only on contract and at definite, fixed prices—not a dollar's worth of work has been or is being done on a cost-plus basis."

Having myself been a victim of such union "journalism," I can sympathize with the Caterpillar Company's feeling that "it is unbelievable that such statements are the result of ignorance—the only possible conclusion is that they are intended as a malicious, vicious attack on our government and on American business and industry generally."

For it is hard to see how the interests of decent workmen can be nourished by such a diet of falsehood and irresponsible charges. Neither is it easy to see how legitimate unionism can be strengthened by spokesmen who go off the deep end in this fashion when the antidote of truth can so quickly follow upon their poison. Certainly the unionism of our dreams—intelligent, responsible, patriotic, and respected—is not brought any nearer by such tactics.

No one can possibly be served by such inflammatory falsehoods except those whose deliberate purpose is to destroy all faith between employers and employees and between American workmen and democratic institutions, and whose appraisal of that workmen's decency and intelligence must be very low.

Stanford Reports

Briefed from a letter from Roy S. Frothingham of San Francisco:

Forty men in the 30- to 55-year-old bracket have just completed a ten-week intensive course at Stanford University's top-ranking Graduate School of Business, similar to the Harvard Course reported in Business Week May 29.

The Stanford group, selected from about 100 applicants from California and the Pacific Northwest and representing a wide range of professional and business interests, came to Palo Alto early in April for lectures, reading, study and problem-working in organization and management, labor relations, personnel and employment, industrial engineering and production method, financial and cost accounting, purchasing and procurement.

These men are being taken rapidly into war industry for management, accounting and personnel work.

The projected second course at Harvard will parallel closely the project just completed at Stanford. The second course there, starting June 21, will follow Course No. 1 but is designed to include a selection of capable women.

W.C.

THE TREND

THE REAL RECONVERSION PROBLEM

War is creating a new and formidable economic problem for America—reconversion. That problem is not primarily one of deciding when military demands for armament have been satiated so that we can then "afford" more for civilians. Rather, it is that the peculiarly total character of modern war is fast imposing on us economic burdens which the initially combative nature of war will make it difficult to carry.

• **We have naturally** been placing all our productive emphasis upon the mechanized heavy goods of battle, willy-nilly forcing output of perishable consumption goods to suffer—as shown by these comparisons:

*Index**	*1935-39 Avge.*	*Aug. 1939*	*Nov. 1941*	*Apr. 1943*
Durable Goods	100	104	197	279
Nondurable Goods..	100	104	140	134

** Federal Reserve Board; chemicals shifted from nondurable to durable class.*

Yet, we have already found that the actual war demands upon our curtailed consumption goods are enormous. The armed forces and lend-lease to our Allies are absorbing ever larger proportions of our now-contracting production of food, textiles, leather, oil, coal, etc. The next stage of the war—one that won't be short—will multiply those demands, placing us in a fundamental economic and political dilemma at home.

For, so long as our armies are fighting their way across the continent against Nazi legions, a prime military necessity will be to secure our rear by keeping foreign civilians supplied with at least a minimum of food, clothing, medicine, and other essentials; to do otherwise would require us to waste sizable forces in policing and would lose whatever economic aid the liberated peoples could render. Of all this, North Africa has already served as an object lesson.

• **But even once military operations** are concluded, our economic role must continue. Recall von Clausewitz' classic remark: "War is merely a continuation of politics by other means." What we are really fighting for is to win the peace. If we wish to see an orderly reconstructed, politically stable Europe, rather than a chaotic and resentful one, we must do more than substitute our own police force for the Nazi rule by terror. In self-interest, it would be absurd for us to shirk that cost of meeting Europe's immediate and minimum economic needs which is the prerequisite for winning the peace.

The trend of Europe's demand for consumption goods will, therefore, rise over the next year at least, and probably over the next two or three. While we are still fighting—first Germany, then only Japan—the requirements for such goods for the armed forces and for lend-lease to our Allies will not sharply decline. But the trend of production on consumption goods is downward.

This implies a contracting share of a smaller output for civilians at home—a pinch that will be tightened by the early exhaustion of accumulated inventories. Yet, even now, we are finding that the more victories our arms win, the less willing are civilians to reduce their living standards. Imagine what reception would be accorded an announcement of reduced rations made on the day that our troops marched through Berlin!

The only way out of the quandary as to who is to get the consumption goods is an expansion of their production. That will involve a sharp and carefully timed change in the entire direction of the economy. The reconversion we face is not simply a release of resources for the building of automobiles, residences, home appliances, and other durable "luxuries" for civilians. The job is to divert manpower, materials, and plant capacity from the war-swollen durable goods lines into the contracted nondurable goods—and into the related service and agricultural industries.

• **That job is much** less easily done. Of course, we could set some plants now making war goods to building new machines for the food, textile, petroleum, laundry, and similar industries. But, it would be some time before the new productive equipment could be made, and more time before it could be translated into larger supplies of consumption goods. And, Europe may demand such machinery in order to rehabilitate its civilian industry, and so reduce the drain on our own.

More important, however, is the fact that production of direct consumption goods is now declining because of the manpower shortage. A mass shift of labor into the nondurable lines would be required in order that existing machine and materials capacity could be fully utilized, and additional workers would be needed for any expansion program. Such a diversion of manpower is hard to achieve simply because existing wage rates favor war goods lines—a single reflection of how our entire economy has been directed toward the "hard goods" of war at the expense of "soft goods."

And the critical factor is timing. Diversion must be begun soon enough for it to help meet the coming crisis in consumption goods. But it must not come so quickly as to endanger the munitions supply at the fronts.

• **Reconversion, in short,** is becoming a national problem of the most fundamental economic and political significance. It arises from the same hard facts of war which, in the first place, made us convert to munitions—and not simply from a questioning of the production demands of the military. Also, it involves a large-scale diversion of resources of the utmost economic complexity. To understand that is to take the first major step towards licking the problem—and winning the peace.

The Editors of Business Week

About the seven-eighths you can't see

EVERYBODY KNOWS that the seven-eighths *you can't see* is the most important part of an iceberg. And that's true of a Mint Julep, too.

For instance, that fragrant green mint and thick silvery frost can make almost *any* Julep look tantalizing. But it's the seven-eighths you can't see—the all-important part inside the frosty glass—that's the very heart and soul of a Julep!

In short, it's the whiskey that *makes* a Julep. That is why, for the deep content and cooling solace of the *perfect* Mint Julep, you should *always* use that matchless whiskey, Four Roses.

How to make the important seven-eighths

Simply take a few sprigs of fresh, tender green young mint. Then cover with powdered sugar and enough water to dissolve sugar. Crush the mint (or just stir it, if you prefer). Place the mixture in bottom of tall glass and fill with shaved ice. Then pour in Four Roses, lavishly, until the glass is brimming. Garnish with mint and let stand till the frost forms thick.

Ah!—what a Mint Julep that will be!

FOUR ROSES *A blend of straight whiskies—90 proof. Frankfort Distilleries, Inc., Louisville & Baltimore*

An Explanation to our Friends

If your bar or package store is sometimes out of Four Roses, please be patient. We are trying to apportion our pre-war stocks to assure you a continuing supply until the war is won. Meanwhile, our distilleries are devoted 100% to the production of alcohol for explosives, rubber and other war products. (Our prices have not been increased—except for government taxes.)

The Successful Executive of the Future Must Be Aggressive, Cost Conscious and Selling Minded

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